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of the

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Philadelphia, Pennsylvania, December, 1939

Edited by the Secretary of the Association

Inquiries and other communications regarding membership, meetings, and the general affairs of the Association, as well as orders for publications, should be addressed to the Secretary of the American Economic Association, Northwestern University, Evanston, Illinois.

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PROGRAM OF THE FIFTY-SECOND ANNUAL MEETING

As has been the custom in the past, main papers and discussion are published in full in these *Proceedings*. The presidential address is, as usual, published in the March issue of the *American Economic Review*.

The discussion of main papers has in some instances been relegated to round table sessions, ·t in many cases special topics were considered, quite unrelated to the other sessions. ·r instance, the main session on "Economic Issues in Social Security Policy," on ·ednesday morning, was followed by a round table conference on the same subject in · afternoon; and papers on "Preserving Competition Versus Regulating Monopoly" ·e discussed at the round table conference on the same subject following. Likewise, ·n papers on "The Economics of War" were subject to special discussion at a round ·e conference on Friday.

· some instances morning sessions were followed by closely cognate afternoon round ·· sessions. For example, the main session on "The Objectives of Monetary Policy" ·Vednesday morning was followed by the round table on the closely related subject ·The Behavior of Bank Deposits in the Business Cycle" on the afternoon of the ·e day. On the other hand, a number of sessions were planned on quite independent ·ics and are in a sense self-contained, with papers and discussion.

The Editor has been authorized to publish some of the round table papers in full. ·thers are to appear in the *American Economic Review* or in some outside publication. ·here their disposition is known, we have made a footnote record of the facts. A sum·ary or abstract of the proceedings describes the character of the meetings in each ·stance.

·ednesday, December 27, 1939

10:00 A.M.

1. *Objectives of Monetary Policy*
   Chairman: ARTHUR W. MARGET, University of Minnesota
   Papers: FRANK D. GRAHAM, Princeton University; B. H. BECKHART, Columbia University; HOWARD S. ELLIS, University of California
   Discussion: RAY B. WESTERFIELD, Yale University; REDVERS OPIE, Oxford University; RAYMOND J. SAULNIER, Columbia University
2. *Economic Issues in Social Security Policy* (Joint session with the American Association for Labor Legislation)
   Chairman: JOHN B. ANDREWS, American Association for Labor Legislation
   Papers: SUMNER H. SLICHTER, Harvard University; J. DOUGLAS BROWN, Princeton University; EVELINE M. BURNS, Columbia University

2:30 P.M. Round Table Conferences

1. *Economic Issues in Social Security Policy* (Joint session with the American Association for Labor Legislation)
   Chairman: J. DOUGLAS BROWN, Princeton University
   Discussion: ARTHUR J. ALTMEYER, Social Security Board; E. WIGHT BAKKE, Yale University; EVELINE M. BURNS, Columbia University; FRANK T. DE VYVER, Duke University; RICHARD A. LESTER, University of Washington; SUMNER H. SLICHTER, Harvard University; EDWIN E. WITTE, University of Wisconsin; GEORGE H. TRAFTON, American Association for Labor Legislation
2. *Bank Deposits and the Business Cycle*
   Chairman: JAMES W. ANGELL, Columbia University
   Papers: FRITZ MACHLUP, University of Buffalo; MARTIN KROST, Board of Governors, Federal Reserve System; VICTOR LONGSTREET, Board of Governors, Federal Reserve System; RIFAT TIRANA, Federal Reserve Bank of New York
   Discussion: NORRIS JOHNSON, Federal Reserve Bank of New York; DONALD S. THOMPSON, Federal Deposit Insurance Corporation; WALTER GARDNER, Board of Governors, Federal Reserve System; PAUL T. ELLSWORTH, University of Cincinnati
3. *Problems in the Teaching of Economics*
   Chairman: RAYMOND T. BYE, University of Pennsylvania
   Papers: BROADUS MITCHELL, Occidental College; AMY HEWES, Mount Holyoke College; WILLIAM W. HEWETT,[1] University of Cincinnati
   Discussion: PAUL M. O'LEARY, Cornell University; MAYNARD C. KRUEGER, University of Chicago

[1] To be published in full in the June issue of the *American Economic Review*.

4. *Price Control Under "Fair Trade" Legislation*
Chairman: EWALD T. GRETHER, University of California
Papers: CORWIN D. EDWARDS, U. S. Department of Justice; HARRY J. OSTLUND, University of Minnesota; REINHOLD P. WOLFF, *Trade Regulation Review*
Discussion: NATHAN ISAACS, Harvard University
5. *Problems of American Commercial Policy*
Chairman: PERCY W. BIDWELL, Council on Foreign Relations
Papers: HARRY D. GIDEONSE,[2] Brooklyn College; FRANK A. SOUTHARD, JR., Cornell University; E. DANA DURAND, U. S. Tariff Commission
Discussion: CALVIN B. HOOVER, Duke University; ERNEST K. LINDLEY, Washington, D.C.; CHARLES R. WHITTLESEY, Princeton University

5:00 P.M. Meeting of the Executive Committee

8:00 P.M. Presidential Addresses (Joint session with the American Sociological Society and the Rural Sociological Society)
Chairman: President THOMAS S. GATES, University of Pennsylvania
Papers: JACOB VINER,[2] American Economic Association; EDWIN H. SUTHERLAND, American Sociological Society

Thursday, December 28, 1939

9:00 A.M. Business Meeting

10:00 A.M.
1. *Transportation Problem*
Chairman: D. PHILIP LOCKLIN, University of Illinois
Papers: JOSEPH B. EASTMAN, Interstate Commerce Commission; C. MORGAN, Interstate Commerce Commission; GEORGE P. BAKER, Harvard University
Discussion: C. S. DUNCAN, Association of American Railroads; HEBERT E. DOUGALL, Northwestern University
2. *Preserving Competition Versus Regulating Monopoly* (Joint session with the American Statistical Association and the American Farm Economic Association)
Chairman: EDWARD S. MASON, Harvard University
Papers: CORWIN D. EDWARDS, U. S. Department of Justice; PAUL T. HOMAN, Cornell University; DONALD H. WALLACE, Williams College

2:30 P.M. Round Table Conferences
1. *Preserving Competition Versus Regulating Monopoly* (Joint session with the American Statistical Association and the American Farm Economic Association)
Chairman: EDWARD S. MASON, Harvard University
Discussion of papers presented at morning session: JEROME FRANK, Securities and Exchange Commission; LEON HENDERSON, Securities and Exchange Commission; MELVIN DE CHAZEAU, University of Virginia; MILTON KATZ, Harvard University; SAUL NELSON, U. S. Bureau of Labor Statistics
2. *Theory of International Trade*
Chairman: FRANK D. GRAHAM, Princeton University
Papers: GOTTFRIED HABERLER,[3] Harvard University; WASSILY W. LEONTIEF, Harvard University
Discussion: CHARLES R. WHITTLESEY, Princeton University; PAUL T. ELLSWORTH, University of Cincinnati
3. *Collective Bargaining and Job Security*
Chairman: GEORGE W. TAYLOR, University of Pennsylvania
Papers: FREDERICK H. HARBISON, Princeton University; DAVID WEINTRAUB, National Research Project; WALDO E. FISHER,[1] University of Pennsylvania
Discussion: ALFRED E. HOFFMAN, American Federation of Hosiery Workers; MERION H. HEDGES, International Brotherhood of Electrical Workers
4. *Banking Reform Through Supervisory Standards*
Chairman: LEONARD L. WATKINS, University of Michigan
Papers: HOMER JONES, Federal Deposit Insurance Corporation; ROLAND I. ROBINSON, Board of Governors, Federal Reserve System

[2] To be published in the March issue of the *American Economic Review*.
[3] To be published in extended form in the *American Economic Review*.

Discussion: CYRIL UPHAM, Deputy Comptroller of the Currency; ROBERT G. RODKEY, University of Michigan; LAURENCE R. LUNDEN, University of Minnesota; LAWRENCE H. SELTZER, Wayne University

5. *The Incidence of Taxation*
   Chairman: HARRY GUNNISON BROWN, University of Missouri
   Papers: JAMES K. HALL,[2] University of Washington; HENRY C. SIMONS, University of Chicago
   Discussion: HAROLD M. GROVES, University of Wisconsin; M. SLADE KENDRICK, Cornell University; TIPTON R. SNAVELY, University of Virginia

8:00 P.M. *Economic Planning*
   Chairman: E. DANA DURAND, U. S. Tariff Commission
   Papers: BENJAMIN M. ANDERSON, JR., University of California at Los Angeles; CALVIN B. HOOVER, Duke University; MORITZ J. BONN, London School of Economics

Friday, December 29, 1939

9:00 A.M. Business Meeting

10:00 A.M.

1. *Growth of Rigidity in Business*
   Chairman: SCHOFIELD ANDREWS, of Ballard, Spahr, Andrews and Ingersoll
   Papers: N. S. B. GRAS, Harvard University; VIOLET BARBOUR, Vassar College; EARL J. HAMILTON, Duke University; HERBERT HEATON, University of Minnesota
   Discussion: RUDOLF A. CLEMEN, American University; RUFUS S. TUCKER, General Motors Corporation
2. *Economics of War*
   Chairman: ERNEST MINOR PATTERSON, University of Pennsylvania
   Papers: FREDERICK POLLOCK, Institute of Social Research; FRANK G. DICKINSON, University of Illinois; BRUCE KNIGHT,[4] Dartmouth College; AARON DIRECTOR, Brookings Institution

12:00 M. Meeting of the Executive Committee

2:30 P.M. Round Table Conferences

1. *Economics of War*
   Chairman: CHARLES O. HARDY, Brookings Institution
   Paper: SIEGFRIED VON CIRIACY-WANTRUP, University of California
   Discussion of Mr. Ciriacy-Wantrup's paper and of the papers presented at the morning session: MICHAEL HEILPERIN, New York City; HERBERT ZASSENHAUS, Juniata College; FREDERICK STRAUSS, U. S. Department of Agriculture; GERHARD COLM, U. S. Department of Commerce; HERBERT STEIN, Washington, D.C.; LEWIS L. LORWIN, New York City
2. *Population Problems*
   Chairman: ALVIN H. HANSEN, Harvard University
   Papers: JOSEPH J. SPENGLER,[5] Duke University; OTTO NATHAN, New York University; O. E. BAKER, U. S. Department of Agriculture
   Discussion: MORRIS A. COPELAND, Central Statistical Board; JAMES G. EVANS, University of North Carolina; ALAN R. SWEEZY
3. *Recent Books on Consumption*[6] (Joint session with the American Marketing Association)
   Chairman: THEODORE N. BECKMAN, Ohio State University
   Papers: HAZEL KYRK, University of Chicago; HOMER W. WIDENER, University of Buffalo; WILLARD E. ATKINS, New York University
   Discussion: RALPH CASSADY, JR., University of California; JESSIE V. COLES, University of Missouri; MARGARET G. REID, Iowa State College; LELAND J. GORDON, Denison University; ROLAND S. VAILE, University of Minnesota
4. *Cost Functions and Their Relation to Imperfect Competition* (Joint session with the Econometric Society)
   Chairman: THEODORE O. YNTEMA, University of Chicago and Cowles Commission for Research in Economics
   Papers: J. M. CLARK,[1] Columbia University; JOEL DEAN, University of Chicago and Cowles Commission for Research in Economics; ROSWELL H. WHITMAN, R. H. Macy and Company
   Discussion: GEORGE J. STIGLER, University of Minnesota

[4] Paper read by W. A. Carter.
[5] To be published in full in the *Journal of Political Economy.*
[6] To be published in full in the *Journal of Marketing.*

THE purpose of the American Economic Association, according to its charter, is the encouragement of economic research, the issue of publications on economic subjects, and the encouragement of perfect freedom of economic discussion. The Association as such takes no partisan attitude, nor does it commit its members to any position on practical economic questions. It is the organ of no party, sect, or institution. Persons of all shades of economic opinion are found among its members, and widely different issues are given a hearing in its annual meetings and through its publications. The Association, therefore, assumes no responsibility for the opinions expressed by those who participate in its meetings.

JAMES WASHINGTON BELL

Secretary

MONETARY POLICY AND COMMERCIAL BANK PORTFOLIOS

By BENJAMIN HAGGOTT BECKHART
Columbia University

In the economic literature of the past two decades, the subject of monetary policy has been approached mainly from the point of view of its relationship to cyclical fluctuations in business activity. Theories have been advanced which ranged all the way from purely monetary explanations of the business cycle, and hence to purely monetary remedies, to those more sophisticated doctrines that endeavor to integrate real and monetary forces and to bridge the gap between value theory and monetary theory.

It is commonly recognized that cyclical fluctuations of the intensity that have been experienced over the past 150 years will arise only in societies organized on a pecuniary basis. The acceptance of this premise, however, does not commit one to a purely monetary explanation of the cycle. It simply leads to the conclusion that somehow, through monetary means, the amplitude of cyclical fluctuations can be reduced and that somehow through monetary means an optimum employment of productive resources can be promoted.

There is general agreement among monetary theorists that the objectives of monetary policy should include a reduction of cyclical amplitudes and a furthering of continuous maximum production at minimum real cost. This is as far as agreement goes. The points of difference among the doctrines advanced are in reality more significant than the points of similarity. There is disagreement concerning the role that monetary policy can play in the realization of these objectives, concerning the criteria that should be followed in policy formulation, and concerning the economic functions of commercial banks. Though there is no unanimity of agreement, scientific thought, relative to the interrelations of monetary policy and cyclical fluctuations, can be classified roughly into two schools—the quantitative and the qualitative.

With full recognition of the fact that such classifications are always somewhat arbitrary, the surface difference between these two schools consists of the fact that the quantitative group lays emphasis on the control of deposit volume in promoting the objectives set forth and the qualitative school lays emphasis on the selective control of bank assets and in particular of bank loans. The former would maintain, raise, or lower deposit volume in accordance with various quantitative criteria such as interest rates, national income, production, employment, prices, etc. The second school of thought, the qualitative,[1] holds that the amplitude of cyclical fluctuations

[1] Statements of the qualitative position are to be found in: William E. Dunkman, *Qualitative Credit Control* (New York: Columbia University Press, 1933); Melchior Palyi, *Liquidity* (Minneapolis: Minnesota Bankers Association, 1936); R. W. Robey, *Purchasing*

can be reduced and disturbing influences from the side of money and credit can be diminished only through a control of the quality of bank assets and a balancing of asset and deposit maturities on bank balance sheets.

The qualitative school holds that a commercial bank should invest in long-term bonds and real estate mortgages, and should extend non-self-liquidating security loans only to the extent of its capital funds and savings deposits. Naturally, high qualitative standards must be maintained in the purchase of such assets. Book credits should be created on the basis of discounts of short-term commercial paper.[2] Only if this policy is followed, the qualitative school maintains, will commercial banks be protected from the unpredictable uncertainties of long-term business and interest rate fluctuations. Only by freeing commercial banks from such uncertainties will the commercial banking structure remain solvent and the deflationary destruction of bank deposits in depressions be avoided.

The differences between these two schools of thought are fundamental. They have to do with the economic functions of commercial banks, with the role of savings in an economy, with the proper basis of capital formation, and with the emphasis that should be given to real as opposed to monetary forces.

The qualitative approach may be thought of as microscopic or particularistic in nature as opposed to the quantitative which is macroscopic or general. The qualitative school holds that an understanding of the nature of cyclical fluctuations and a perception of the policies needed to mitigate cyclical amplitudes result from studying the effects of particular types of credit extensions and of particular loans to particular industries and companies. The structure of credit must be set against the structure of production. Types of credit must be related to types of use.

Business cycle analysis, the qualitative school urges, cannot be advanced by reasoning in aggregates. The particulars in the structure of credit, production, prices, and interest rates must be given careful consideration if knowledge is to be advanced. Attempts on the part of the quantitative equation school to encompass economic processes in algebraic formulae, in which the various symbols stand for aggregates and conglomerate averages, obscure the functioning of the economy by creating an atmosphere of unreality. Interdependent and interacting relationships are overlooked and, in consequence, single is substituted for multiple causality.

Power (New York: Prentice-Hall, Inc., 1938); James G. Smith, "Quantitative vs. Qualitative Control of Money," *The People's Money,* Vol. I (1935); Caroline Whitney, *Experiments in Credit Control, the Federal Reserve System* (New York: Columbia University Press, 1934); H. Parker Willis, *The Theory and Practice of Central Banking* (New York: Harper & Brothers, 1936).

[2] By short-term commercial paper is meant that made, drawn, or negotiated in the ordinary course of business in order to finance current requirements in connection with the purchase, manufacture, processing, and transportation of goods. The consummation of the transaction in question will provide funds for the repayment of the credit extended.

It is true that in its microscopic analyses and in relating the volume of certain types of bank credit to certain types of transactions, the qualitative approach partakes of a quantitative character. This volume of bank credit creation would be limited in amount through its relationship to certain types of transactions. Viewed from this particular angle, all monetary theorists are quantitative in their approach. The fact that there is this quantitative element to the qualitative school by no means weakens the qualitative thesis. The two approaches still remain at opposite poles.

The qualitative school holds that the extension of credit is the province of the individual bank and that banks should not be used as instruments of national policy in the financing of governmental deficits, in the lowering of interest rates, or in attempts to activate business recovery. The banking system should not be used in the effort to overcome rigidities in costs and prices, nor in attempts at national economic planning. If credit extensions were related to short-term commercial debt and if a balanced condition held in the relationship between bank assets and bank liabilities, bank deposit creation would be adjusted and related to the flow of goods and services through the economy.

In this paper, emphasis will be given to the qualitative approach and to the effect that monetary policy may have on commercial bank portfolios and to the effect in turn that changes in commercial bank portfolios themselves may have as determinants of monetary policy. The propositions advanced are not offered as a complete presentation of this school of thought and make no pretense at the formulation of a definitive theory. The objective is simply that of giving emphasis to and of entreating sympathetic understanding of one aspect of the problem that is all too frequently ignored or neglected.

The quantitative doctrines have taken the direction they did largely by reason of the widespread conviction that bank deposits were mere substitutes for standard money. Discussions of monetary policy have stemmed from the price-specie flow analysis of the Ricardian theory. The causal sequence in price determination imputed to the standard money was in turn imputed to bank deposits. Inasmuch as it was held that bank deposits were price determining or income determining, the conclusion was quickly reached that the volume should be controlled by various quantitative criteria. Emphasis was placed on how much credit rather than on what type of credit. Discovering that increases in the quantity of bank deposits did not attain the ends envisaged, the quantitative school has, in recent years, expanded its practical program to include so-called "compensatory" governmental spending and control of investment credits.

British experience is illuminating, it seems to me, for the light it throws on the quantitative-qualitative controversy. In this respect, the successful functioning of the British banking system in the half century prior to the

outbreak of the World War was the consequence not of the passage of the Peel Act of 1844, which was based upon a quantitative monetary theory of cyclical fluctuations, but rather was the result of an adherance to qualitative standards on the part of the joint-stock banks. Experience convinced British bankers that the commercial and investment functions of banks should be kept separate and that emphasis should be given to the self-liquidating character of the transactions underlying the paper accepted for discount. As one British banker stated, the test of a good banker was whether he recognized the essential differences between a bill of exchange and a mortgage.

The portfolio policies of the British banks accounted in part, too, for the successful functioning of the international gold standard. Founded upon the truly liquid character of British bank portfolios, the international gold standard was not shaken by breakdowns in clearance or by forced liquidations in the credit structure. A liquid banking system does not need to liquidate.

If banking theory had started not with a consideration of standard money, but rather with the use of credit in the medieval fairs, with the developing use of credit instruments in domestic and international trade, and with the structure of business, mercantile, and consumer credit, it would have been recognized that credit power arises from the world of trade. Emphasis would have been placed on the use of bank credit and the services rendered by banks in the directional flow of the credit volume. This type of analysis, it might be added, would inevitably have stressed the operation of real forces rather than surface phenomena.

In addition to the doctrine that credit is a substitute for the standard money, the terminology conventionally employed in the field of money and banking encourages the general acceptance of the purely quantitative approach. Distorted interpretations have arisen through the fact that terms are used long after the justification for their employment has ceased to exist. Such terms as money market and monetary policy are used when credit market, credit or debt policies would be the more accurate.

This concern with lags in terminology must not be taken as evidence of mere pedantry. The use of particular terms is of great importance in coloring theoretical concepts and reasoning. Employing the term monetary policy tends to divert attention from the strategic role that commercial banks play in the policies adopted. All too often, this is overlooked, and, in discussions of monetary policy, the reasoning jumps from a consideration of the particular monetary policy adopted—devaluation, silver purchases, or central bank open-market operations, etc.—to its alleged ultimate effect on prices, interest rates, income, and employment without adequate or complete consideration being given to the intermediate effects on the commercial banking system. As already indicated, when the effect of the

policies adopted upon commercial banks is considered by quantitative theorists, it is viewed mainly from the standpoint of changes in deposit totals. Any effect that the policies may have on the character and composition of commercial bank assets and any effect, in turn, that changes in commercial bank assets may have on the objectives set forth, receive but scant attention.

The currency theory of banking, in which bank deposits are given main consideration, is a natural result of the terminology employed. Discussions would be much more realistic if monetary policy were labeled credit or debt policy. The term credit policy would automatically direct attention to the asset side of bank statements. The term debt policy would possess the advantage of directing attention to monetary policies that are undertaken in order to validate a particular debt structure and in turn to the changes in the character and composition of the debt structure, which are the inevitable accompaniment of so-called "inflationary" or "reflationary" action.

It is this emphasis on the liability side of bank statements by the quantitative school that has precluded interest in commercial banking theory. One may search in vain in many of the recent works on monetary policy and theory for any discussion of the economic functions of commercial banks, or of the effect on economic fluctuations of changes in the character and composition of commercial bank assets, or of the need to relate commercial bank assets to types of deposit liabilities.

This very general disregard of changes in the character and composition of commercial bank assets is further evidence of the attitude of this school of thought that credit is a homogeneous quantity. This assumption is implicit in the attempt to measure the credit volume by bank deposit liabilities.

Here again the idea should be reiterated that, if progress is to be made, the analysis must be microscopic in character. The initial impact resulting from increases in different types of credit, in personal loans, security loans, investment holdings, mercantile credit, commercial credit, etc., varies greatly and, in consequence, the resulting economic developments take a different direction. Changes in the character and composition of bank portfolios are of consequence not only by reason of the initial impact but also by reason of the fact that such changes determine the degree to which commercial banks become involved in the hazards of long-term fluctuations. The longer the loan, the greater ordinarily is the risk and greater is the need for knowledge of future developments.

Emphasis on the quantity of bank deposit liabilities has given rise to the theory of liquidity in terms of shiftability. Liquidity in the sense of the self-liquidating character of bona fide commercial loans has been discarded by some as an outmoded concept. It is claimed that in periods of declining business activity not even short-term self-liquidating assets retain this qual-

ity, despite the fact that recent statistical studies reveal that self-liquidating assets adjust themselves normally and naturally to a shrinking volume of business. And it should be added that the reduction taking place does not, in itself, give rise to deflationary influences, as does the reduction of non-self-liquidating assets, such as security loans, mortgage loans, or bank investments. The reduction of self-liquidating assets is the result of a business decline rather than the cause.

On the other hand, the liquidation of even a small proportion of non-self-liquidating assets by a few banks may generate serious deflationary forces. The amount that can be shifted or sold with no change in price is very restricted. This means that bank, personal, or corporate holdings of such assets can be reduced in large amount, with little sacrifice of price, only if central banks or governmental financial agencies, through debt creations, stand ready to absorb the assets that are being liquidated. In doing so, these different financial institutions themselves become involved in the task of trying to maintain the volume and price of certain forms of debt. As the portfolio of the central bank takes on more and more the character of capital assets, it becomes unable to exercise any kind of control, either quantitative or qualitative. Only if central bank assets consist largely of self-liquidating paper will its credit policies be divorced from considerations of the maintenance of debt values.

In relating commercial bank lending functions to the flow of goods through the community, the qualitative school does not look upon bank credit as a substitute for the standard money. Business creates its own medium of exchange through transactions involving the production and sale of goods. The function of commercial banks is simply that of recognizing, guaranteeing, and clearing certain types of credit transactions when requested to do so by the business community. In this fashion, credit institutions make for what has been termed "a refined system of barter."

The heart of the issue centers around the kinds and types of business credit that should be so recognized and turned into bank deposits. The qualitative school concludes that only those transactions involving the flow of exchangeable goods through the economic system should be so converted. Credit granted in accordance with this principle is liquidated through economic clearance and through such liquidation is related to productive processes. If the credit standards imposed by banks remain the same and if the balance sheet position of the borrower does not change, the financing of an increased proportion of working capital needs, which, according to Mr. Robertson, might be a source of disequilibria, albeit a limited one, would not occur. In the making and refusing of loans, in the guaranteeing and generalizing of credit, the credit department becomes the heart of banking operations.

Incidentally, if these principles of loan extension were adhered to, veloc-

ity itself, as Dr. Palyi has pointed out, will be subject to a certain measure of indirect control. Deposit credits resulting from business borrowings are used. The period over which they are used will be determined by the life of the loan. They do not pile up in hoards to constitute a source of potential inflationary danger.

It is sometimes objected that the relating of commercial bank loans to working capital requirements affords no assurance that the community will have a sufficient volume of purchasing power in the form of bank deposits or that the demand for cash balances will be fully satisfied. It might be pointed out that how much purchasing power a community requires in the form of bank deposits is a topic of acute controversy among the members of the quantitative school itself. There is disagreement, not only as to the quantitative criteria to be applied in order to provide that volume of purchasing power, but also as to the very definition and measurement of purchasing power.

Too often in trying to reach a decision as to the amount of purchasing power a community requires, the quantitative theorists are prone to introduce various assumptions in their analyses which often are more in accord with the writer's own predilections than with the actual economic environment. Assumptions are made as to the nature and causes of equilibrium, as to the factors determining the demand for cash balances, as to leads and lags in monetary behavior and economic activity, as to the effect of changes in the total quantity of bank deposits upon its ownership distribution, as to the activating effect of interest rates, as to the response of wage earners to changes in real and money wages, as to the response of demand and cost curves to "aggregate demand," as to psychological propensities relative to consumption and savings, as to causality in economic sequences, and the like. Naturally, assumptions must be made in theoretical analyses where knowledge is incomplete, but the incompleteness of the foundations should be recognized and, where these are incomplete, they should not be used as the basis for a definitive program.

The qualitative school holds that the quantity of purchasing power a country requires in the form of bank deposits is not something that can be determined mechanistically. A community creates its own purchasing power through the production of goods and services. Decisions as to the amount of such real purchasing power to be converted into bank deposits rest with the community itself, and in meeting the community's demands for bank deposits, the banking system must take care, as was suggested earlier, not to involve itself in future uncertainties. This can be done only through asset control. If through their portfolio policies banks can detach themselves from the hazards of the long run, these hazards will themselves become of lesser significance.

The granting of non-self-liquidating loans not only involves the bank-

ing system in the errors of present forecasts relative to future developments but sets forces in operation that exaggerate these errors. Miscalculations as to future prices and costs result, and in consequence production is misdirected. Inefficiency and waste are engendered and cyclical fluctuations are aggravated.

Thus in their effect on stock prices and hence on entrepreneurial expectations, the increase in security loans in the twenties had a distorting effect upon business activity. Judgments became blurred relative to future business prospects. This or that type of business enterprise was stimulated, depending upon the speculative vagaries of the public. The later decline in stock prices and the reduction in security loans intensified the depression. As one authority has so well phrased it: "A credit structure built upon the fickle fortunes of speculation is certain to collapse, because the profits of speculation depend upon liquidation."[3]

The purchase of substandard foreign bonds, the rapid growth in installment credits and the sharp rise in the volume of finance bills in the acceptance market in the twenties, all of which were related to bank credit creations, had an inflationary effect on business activity and, in addition, had the effect of glossing over certain fundamental disequilibria. The effect of increases in American tariff rates was held in abeyance as was the ultimate breakdown in reparations and interallied debt payments. The attempt to substitute credit for true economic adjustment prolonged economic artificialities with the consequence that the depression was all the more severe and prolonged. Contemporary diagnoses of developments through the twenties proved correct only as these were based on qualitative analyses. Quantitative analyses proved completely misleading.

The use of the banking system in the twenties by quantitative adherents to achieve certain predetermined ends has been completely dwarfed intensively and extensively by the use of banking systems in all countries in the thirties as instruments of national policy. In the totalitarian nations, bankers are no longer free to exercise their own discretion in the selection of loan risks. Commercial banking, in the generally accepted meaning of the term, has ceased to exist. Even in the United States, interest rates have been lowered below the levels that otherwise would rule and, in consequence, many commercial banks, in order to meet operating expenses, have increased their holdings of long-dated debt in the form of bonds and capital loans. The offsetting liability to these long-term capital assets is demand deposits. Banks are borrowing short and lending long, and in many cases loans have been granted at rates of interest scarcely high enough to take care of normal expected losses. The involvement of commercial banks in long-term interest and business fluctuations has occurred at a time when, by reason of the low state of bank earnings, the strengthening of

[3] Woodlief Thomas, *American Economic Review,* March, 1935, p. 30.

the capital structure becomes difficult. Easy money policies were adopted in the first instance to activate business, but so deeply involved have many banks and the federal government become in these policies that cheap money has become an end in itself.

It has frequently been pointed out that the coinage of capital assets into bank credit does not make for an optimum use of a country's productive resources. Industrial mergers and amalgamations are brought about that are the consequence of financial rather than of industrial considerations. The substitution of machinery for labor, where this is possible, is stimulated. Capital-using rather than labor-using industries are favored. The rigidity of the price structure is intensified through the growth of long-term debt.

The doctrines outlined in this paper would make changes occurring in commercial bank portfolios the criteria of monetary policy. A balanced condition should exist between short- and long-term assets and liabilities. Increases in book credits should be matched by increases in short-term commercial loans.

Commercial bank portfolio policies are to be essentially qualitative in nature, and in order to insure the qualitative character of commercial bank lending policies, central banks will have to base their policies in part on quantitative considerations. This is necessary by reason of the legal relations existing between the reserve balances of commercial banks and their deposit liabilities. Should commercial loans increase, the central bank could very well take action so that no check to the commercial loan increase will come from the side of deficient reserves. Similarly, if there is a sudden demand on the part of the community to change its bank deposits into currency, central banks likewise should adjust their policies in order that this can be met without causing a decline in member bank reserves, which otherwise will force commercial banks to alter their commercial loan policies.

If, on the other hand, the increase in commercial bank portfolios takes the form of security loans, of mortgage loans, or of investments, matched on the liability side of commercial bank statements by an increase in demand deposits rather than by an increase in savings deposits, the central bank should follow a restrictive policy. As a final thought, gold inflows and outflows should not be permitted to affect the credit base to the detriment of the character, composition, and quality of bank portfolios.

The critics of this position will reply that the ideal proposed for the operation and functioning of commercial banks is a far cry from reality. Not only are bank portfolios not in accord with the principles set forth, but their funds are so large and the commercial borrowing demands so small that they are forced to continue to add to their noncommercial assets.

To state that banks must invest in long-term securities by reason of the plethora of their funds is simply to give sanction to the misuse of the banking system. It must be remembered that these funds have been forced on the banks in consequence of the quantitative monetary policies that have been followed.

The decline in the commercial loan demand, itself, has resulted in large measure from the consequences of the easy money policies that have been followed. The increase in bank security loans and investment holdings in the twenties, as well as the federal deficits of the thirties, have relieved business enterprise of the need for borrowing at short term. Long-term, rigid, inflexible debt has been substituted for flexible, short-dated commercial loans. In their own portfolio policies, commercial banks have been helpless to stem the tide of the quantitative policies (active and passive) that have been responsible for increasing member bank excess reserves to unprecedented heights.

In view of the policies followed in the past, the introduction of qualitative principles at the moment would be no easy task. One would have to take cognizance of the present situation and plot future courses accordingly. So deeply involved is the banking and financial system in the quantitative controls followed, that readjustments will have to be gradual.

The introduction of qualitative principles would involve the elimination of excess reserves and the restoration of short- and long-term interest rates to more normal levels. It would mean a complete reliance upon savings or taxes for the balancing of the federal budget. It would mean that the noncommercial assets of commercial banks would thenceforth not increase, except as these were related to savings. No check would be administered to increase in bona fide commercial loans. Though the transition to the system so envisaged would involve no mean readjustments, yet, in my opinion, these readjustments will have to occur someday, and in view of present policies and likely trends and projections, they will be all the more severe the longer they are delayed.

In conclusion, may I suggest that future advances in monetary theory and policy await a re-examination of the economic functions of commercial banks. A huge superstructure of theory, topped by recommendations for policy action, has been erected by the quantitative school on the basic premise that bank credit is but a substitute for the standard money. The qualitative school suggests that the premises underlying that logical superstructure be re-examined. The question might be asked whether monetary theorists have not proceeded along the wrong road and whether the highway marked by the writings of Adam Smith, the doctrines of the banking school, and the contributions of Stephen A. Colwell do not offer more fruitful possibilities.

MONETARY POLICY AND INVESTMENT

By HOWARD S. ELLIS
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"A society . . . . which saves, can escape a progressive fall in income and investment only through the continuous development of new investment outlets, such as are created by technological progress, the rise of new industries, the discovery of new resources, the opening up of new territory, and the growth of population": thus writes Professor Hansen.[1] In diametrical opposition Professor King believes that "whenever . . . new equipment for producing direct goods is much needed, interest and profit rates rise, and, as a result, we invest more and spend less. Thus adjustments in the direction of equilibrium are always being made. The process is automatic, hence economists have no occasion to worry either about lack of opportunities for investment or about a surplus of funds awaiting investment."[2] It is my conviction that the truth lies between the extremes of these two views, that it is possible to indicate in a general way the resolution of this great divergence, and finally that the solution is essential for any reasonable monetary and economic policy.

Let us consider first saving—I use both this term and investment in an *ex ante* sense. Now the first step in saving—even in saving by institutions such as life insurance companies, building and loan societies, corporations, savings banks, and authorities—is the accumulation of money. As matters stand, part of the savings get no farther: they are absorbed into hoards or dissipated by "attempts to hoard" for the time being. The fruition of saving in investment is not "automatic." But this is not to agree with the Keynesian tenet that *any* net saving automatically decreases investment and income,[3] nor to agree with Lange that saving over an "optimum rate" has these effects.[4] The original Keynesian version of the impasse, as a number of critics have pointed out,[5] rests upon the assumption of an absolutely elastic schedule of liquidity preference—people are willing to hoard unlimited amounts of money.

Even Lange's more moderate version, whereby the desire to hold money increases with higher incomes and lower interest rates, does not give us an automatic impasse from either cyclical or secular angles through exceeding

[1] Alvin Hansen, *Full Recovery or Stagnation?* (New York, 1938), p. 296.

[2] Willford I. King, "Are We Suffering from Economic Maturity," *Journal of Political Economy,* 48 (October, 1939), 5, 616.

[3] J. M. Keynes, *The General Theory of Employment, Interest, and Money* (London, 1936), p. 84.

[4] Oskar Lange, "The Rate of Interest and the Optimum Propensity to Consume," *Economica,* 5 N.S. (February, 1938), 17, 12-32.

[5] *Ibid.,* p. 19; J. R. Hicks, "Mr. Keynes and the Classics," *Econometrica,* 5 (April, 1937), 147-160; Gottfried Haberler, *Prosperity and Depression,* revised ed. (Geneva, 1939), pp. 218, 246.

an optimum propensity to save. The optimum is said to rest upon a counterbalancing of two forces: the expansive force given by a fall of interest rates when people do not spend but instead make a part of the active circulation available for liquidity reserves, and a depressive force given to entrepreneur expectations when the demand for consumption goods falls off. For a theory in which all of the variables are operating simultaneously, the expansive force of lower interest rates involves a paradox: output is being expanded through the accumulation of funds being used neither for consumption nor investment. A truly dynamic theory, which dates its variables, conceives of low interest rates as an "expansionary tendency likely to arise during the contraction," in Haberler's phrase, and exercising its actual expansive force later in recovery. The same flaw of simultaneity or timeless variables appears in the supposed depressive force: current investment falls or remains low because current consumption is restricted. But it has been justly observed by Hansen that "former recoveries have typically been carried forward on a wave of new investment which was *not* narrowly gauged by the current and immediate level of consumption purchases. Large, bold projects, looking far into the future, have typically been undertaken in the upswing period."[6] Thus though Lange correctly holds that the demand for capital goods derives from consumers goods, the derivation need not be from contemporary consumption.

While the allegedly orthodox view that savings pass automatically into investment cannot be maintained, neither can the doctrinaire oversaving view be supported that saving (either any saving or that exceeding an imagined optimum) automatically fails to arrive at investment or even reduces it. There is nothing automatic, mechanical, or functional about it either way. The more attention comes to be centered upon technical, psychological, and institutional factors which either facilitate or impede the movement of savings into investment, the more rapidly will the theoretical cleavage disappear. A frank, nonpartisan observer readily recognizes that, under sufficiently adverse circumstances, saving not only results in no investment but actually induces contraction through hoards, attempts to hoard, or adverse entrepreneur expectations, but that if these obstacles can be reduced or removed, saving adds to the complement of capital goods.

In the acute phases of cyclical depression the strong increase of liquidity preference results in a failure of savings to pass into investment. Looking aside for the time being from measures directed toward encouraging investment, it may be good public policy in protracted depressions to penalize not only that hoarding which springs from the conversion of non-monetary to monetary assets (liquidation) but even that hoarding which comes from current income (saving). To generalize from the cyclical to the secular

[6] Hansen, *Full Recovery or Stagnation?* p. 279; the italics are the author's.

situation as to fact and policy would, however, be perilous. A progressive and persistent increase of the desire for liquidity, as something subjective, spontaneous, endogenous, and separable from the objective facts adverse to investment, is difficult to conceive for either private or institutional savers.[7] Furthermore, secular increase of hoarding of this character would be easy to offset by an even secular increase in money.[8] Measures designed to reduce saving in what is called "secular stagnation" seem to ignore that, even with a certain leakage or loss, savings do pass into investment, and that investment raises incomes. Keynesians agree with orthodox theorists that the greater the complement of capital instruments the higher are real wages. Suppose that a portion of national savings slips persistently into hoards or that persons and institutions constantly attempt to hoard a portion of their savings. Would not a permanent policy of reducing savings spell the perpetuation of supply-reduction measures appropriate only to the short run, and an attempt to achieve prosperity through scarcity?

Let us assume that the increment to investment governs the increment to employment. One characteristic of cyclical periods of increasing production, quite aside from mechanical reactions envisaged by the older quantity theories, is rising prices from improved anticipations. Voluntary saving has this superiority over expansion solely through credit creation, that it liberates factors without causing their prices to rise; or, alternatively, a given amount of credit expansion will go farther in carrying forward employment with the accompaniment of voluntary saving than without it. The driving force of increased production is certainly not saving but factors on the demand side to which we come in a moment; but voluntary saving supplies the wherewithal for expanding output in the most salutary way.

One final observation upon savings. Recent statistical enquiries of Colin Clark and others establish clearly the validity of the emphasis upon income and not interest rates as the chief variable upon which the magnitude of savings depends.[9] This signifies by necessary counter-implication that for a given amount of income, savings are fairly inflexibly determined—by corporation practices, the distribution of income, social mores, and private habits. Public policies directed toward saving itself therefore impinge against particularly stubborn and resistant forces. Consider the present situation with its lethargy of investment, but with its lurking danger of an ultimate war boom of disastrous proportions. If the state introduces measures to alter the deep-seated social, economic, and political determinants of saving, may it not have to reverse its policy and attempt to teach corporations and private persons new habits again in a twelvemonth? Has

[7] Jacob Viner, "Mr. Keynes on the Causes of Unemployment," *Quarterly Journal of Economics,* 51 (November, 1936), 1, 152-160.

[8] Gottfried Haberler, "The Interest Rate and Capital Formation," *Capital Formation and its Elements* (New York: National Industrial Conference Board, 1939), pp. 126-127.

[9] Colin Clark, *National Income and Outlay* (London, 1937).

not Keynes himself illustrated this absurdity in his pronouncements since the outbreak of war?[10] Any so-called "secular" situation is apt to see something happen; long-run or persistent inactivity may be suddenly terminated by cyclical developments. Savings itself is something too inflexible for successful manipulation.

The middle-ground position with respect to saving would run somewhat as follows. Savings are neither automatically transferred to investment nor automatically diverted from investment. The transfer process is conditioned by technical, psychological, and institutional factors of great complexity, probably defying any functional expression. In periods of acute cyclical depression when saving means hoarding, it may, in particular cases, seem advisable to encourage consumption through doles and other measures. Over longer periods showing a lagging pace of investment, increasing the funds available for liquidity reserves would suffice to offset an indigenous increase of desire for liquidity per se; but if, as seems more probable, the obstacles inhere in the demand side, penalizing hoarding would be curing symptoms. Measures to reduce voluntary saving have been supported upon the argument that in less-than-full employment, the potential supply of capital cannot be the limiting factor.[11] But in this situation the supplies of all factors appear redundant; and since the historical evidence seems to indicate that revivals have not been based upon rates of current consumption, saving cannot be charged with this redundance. Voluntary saving itself appears as a normal economic function, carrying advantages over alternative provisions for expansion; and, unless the state abrogates this function to itself, saving does not lend itself well to manipulation. Finally, nothing in this philosophy affords any apology for inequality merely for the sake of saving.

Before we pass from the supply side of the problem in saving to the demand side in investment, it is necessary to be sure that we have in mind the precise character of the ailment envisaged in current discussions as economic maturity, stagnation, or a contracting economy. We may fall victim to pressing various physical or biological analogies too far, or we may simply be coining new synonyms for depression, bad times, crises, or the "dearth" of Elizabethan times. What specifically is the complaint? Is it chronic under-utilization of physical plant, persisting unemployment of labor, low interest rates, low wages and profits, low incomes generally? The question would, of course, not be worth asking if there were not confusion on the subject. Sometimes, for example, the prevalence of very low rates in certain segments of the money market is taken as the earmark of stagnation, and yet it is fairly clear that without unemployment and idle plant we would feel no especial concern over low interest rates. Indeed

[10] J. M. Keynes, *New York Times*, November 14, 1939, p. 5.
[11] Colin Clark, *op. cit.*, p. 273.

in theories of equilibrium with less than full employment, low interest rates are the necessary requisite to reaching full employment. Again, are low incomes in general the complaint? Such an answer would be suggested by the term chronic depression, for in cyclical depression incomes are low. But in fact we discover stagnation attributed primarily to societies with large incomes, and the contemporary scene in America is thought to be characterized by a reasonably good level of national income. If low income rates do not constitute stagnation, what does? Economists of all persuasions would agree, I believe, that the current malady is chiefly the under-utilization of factors. This directs the enquiry to the demand side, and in a society based upon private enterprise, particularly to the demand for capital, or investment.

Obstacles to investment fall into three broad categories—institutional, psychological, and technical.[12] Subsequent analysis will indicate that the technical obstacles are partly unreal and partly pure guesses as to the future; some of the psychological obstacles are unimportant, and those which are serious derive for the most part from institutional factors. We discover the very core of stagnation in rigid prices, monopoly restriction of output, inequality in the distribution of income, difficulties in changing the direction of production including adaptation to certain new, more "social" wants, relatively high levels of interest in some segments of the money market, and, finally, certain political factors—taxes which bear upon enterprise, tariffs and quotas, embargoes on capital movements, expropriation of property, and the like. It is the essence of a synthesizing theory, such as that advanced in these pages, to dispense with analytical elements upon which there prevails complete disagreement, and to utilize elements upon which there is fair accord. Upon this basis, the general oversaving thesis and the doctrine of lacking technological uses of capital will have to go by the boards, but the institutional elements remain as common ground. The term institutional must, however, be conceived broadly, for some of these obstacles reach deep into the foundations of the system of private enterprise or even, according to one school of thought, inevitably characterize the system. Anticipating some subsequent conclusions upon policy, I may say that the synthesizing analysis almost necessarily implies for the present situation a relatively large volume of government investment, though the conservative may wish to insist upon its transitional character.

Certain marginalia seem to be in order concerning the nature of institutional obstacles to full employment and the investment of savings. Rigid wages have often been said to be the very foundation of the Keynesian

[12] A somewhat similar classification is employed by Gottfried Haberler, "Interest Rate and Capital Formation," *loc. cit.*, pp. 123-125. Of course the classification is not "hard and fast."

system.[13] This is indeed true in one sense: Keynes believes it easier as a matter of policy in a society with increasing productivity to allow money wage rates to rise and to prevent commodity prices from falling, than to stabilize money wages and force commodity prices down. Critics have generally missed the point, however, that in his analysis of equilibrium with less than full employment, rigid wages do not appear in the enumeration of factors responsible for the situation. For this reason the Keynesian theory is psychological and technological, but not, at least explicitly, institutional. It is only necessary to work the explanation of Keynesian policy back into the analysis of unemployment, however, to discover its common ground with traditional theory. The inflexibility of wages downward when other prices generally are falling, or the tendency of strongly organized labor to a successive racheting of wage rates upward in "normal" times, is quite consonant with the orthodox position that, however much a lessening of inequality may be desired, an advance of wages unaccompanied by a parallel increase of productivity will result in unemployment.

The analysis of underemployment must incorporate not only wage rigidity, but it must take full account of monopoly and other price rigidities throughout the system. To have done this in systematic fashion constitutes the great superiority of Myrdal's work on *Monetary Equilibrium* over the Keynesian systems.[14] As a cause of equilibrium with less than full employment, monopoly and monopolistic price policy figure less significantly for their levy upon consumer real income than for their restriction of the field of investment. Labor, capital, and all hired resources tend to be used in the restricted quantities determined by marginal-revenue product and not marginal product.[15] In view of the complete agreement of traditional equilibrium economics, of the older theories of cyclical variation, and of the Keynesian-Stockholm school as to the disequilibrating effect of monopolistic and other rigid prices, I think it safe to ignore the contrary proposition that price rigidities act as "stabilizers." Mr. Hicks succeeds in demonstrating only that if a commodity is initially overpriced, a rise of other prices may reduce disequilibrium and stay the advance of those other prices. He does not consider the case in which an administered price is too high but other prices fall,[16] though it is precisely in depression or stagnation that monopoly influences are most nefarious! Professor Hansen, the leading proponent of the stagnation thesis in this country, develops

[13] Haberler, *Prosperity and Depression*, 2nd ed., p. 235, n. 1, pp. 238-239; W. W. Leontief, "The Fundamental Assumption of Mr. Keynes' Monetary Theory of Unemployment," *Quarterly Journal of Economics*, 51 (November, 1936), 1, 192-198.

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the argument with great care against a background of inflexible prices and costs.[17]

The second set of institutional obstacles to investment turns upon extreme inequalities in the distribution of wealth and income. Inequality of wealth permits to only a few the entry into productive enterprises requiring large blocks of capital; it restricts to a few the development of personal capacities of high technical order. Consequently inequality not only springs from but also fosters monopoly. Inequality of income increases the amount of voluntary savings; if institutional obstacles interfere with the flow of savings into investment this aggravates difficulties. It may be noted that this does not constitute savings or inequality per se into the cause of unemployment after the fashion of Rodbertus or Keynes. Without monopoly and other institutional interferences to the tansfer process, a competitive system endowed with a non-deflationary monetary policy would apparently utilize savings—perhaps not without cyclical interruptions—whether or not they sprang from a humane distribution of income.

I touch briefly upon other institutional obstacles, although the potency of the aggregate, including price rigidities and inequality, could account adequately for the existing lethargy of investment. A society enjoying a growth of national income naturally desires to consume in new ways. Being comfortably ensconced in sheltered positions, monopolies do not in general reveal much concern about catering to new wants. This very immobility would tempt the innovator, the true entrepreneur in Schumpeter's sense; but often the way is blocked by the necessity of formidable initial outlays upon the "selling costs" of monopolistic competition. The process of changing over to new types of production works against heavy costs, frictions, and uncertainties. Furthermore, many fields which seem to be indicated as genuinely corresponding to consumer or public demand have so social or communal a character—hospitals, or slum clearance conjoined with housing projects—that private enterprise has found the conditions of production and demand too complex and unusual. Many of these applications of capital may in the end cover the competitive "opportunity costs," though the state itself for the present has to play the innovator. Much the same appears to be true of certain more risky channels of production already served by private enterprise but suffering under disproportionately high money costs in comparison with safer investments.[18] Moody's triple A rating may be an institution weighing heavily on unorthodox but necessary economic experimenters.

Finally it may be asked whether saving itself and the technical poten-

[17] Hansen, *Full Recovery or Stagnation?* pp. 299-301.

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tialities of investment can be charged with the ruthless thwarting of enterprise which prevails in the fields of foreign investments and international trade? Even an exponent of "Beggar-my-Neighbour Remedies for Unemployment" emphasizes that the conditions necessary for short-run advantages are complex, and that such "remedies" defeat themselves in the long run by provoking retaliation.[19] I do not need to expatiate upon the lets and hindrances to investment involved in some of our domestic policies since these have been sufficiently exposed, frequently with suspicious zeal.

In addition to objective or institutional, there exist also psychological impediments to real capital formation, but few of them arise spontaneously or persist independently. Particularly is this true of liquidity preference. Most hoarding springs not from miserliness but from insufficiently attractive alternatives. If, indeed, accumulation outstrips improvement, there may be a psychological resistance to low interest rates. But if there is no prospect of a reversal of the situation, few potential investors will continue the hunger strike; as Haberler remarks, "After a while even John Bull will become accustomed to 2 per cent or 1 per cent."[20] The same observation holds regarding a possible general abatement in the venturesomeness of entrepreneurs, particularly in large corporations through the spread of professional entrepreneur-manager control divorced from ownership. Eventually the investor would be forced to a recognition of realities: that he cannot eat his cake in the form of conservatism and security and also have it in the form of the high returns to be expected only from assumption of marked risks. For the rest, the so-called "psychological impediments" are not distinguishable from objective conditions. There is no native instinct not to invest, though there is the subjective reflection of difficulties engendered by rigid costs and prices, monopoly, and other "real" factors.

The third set of obstacles envisaged by the theory of equilibrium with less-than-full employment is supposed to stem from inelasticity or lack of sufficient magnitude in the underlying technological schedule of capital productivity or efficiency. This I believe to be the weakest paragraph in the brief, the least eligible for a synthesizing analysis. In the first place productivity or efficiency pertains only to actual investment—not to saving which bogs down in abortive lacking, losses, hoards or attempts to hoard. There can be no obstacle to investment from the shape or position of the demand function itself; at most it would mean that, if there existed an institutional or psychological floor to interest rates, we should reach equilibrium with less employment than we should with greater elasticity or magnitude in the demand for capital. Eliminating such a floor on the basis of the improbability of continuous absorptions into liquidity reserves,[21]

[19] Joan Robinson, "Beggar-my-Neighbour Remedies for Unemployment," *Essays in the Theory of Unemployment* (New York, 1937), pp. 210-231.
[20] Haberler, *Capital Formation, op. cit.*, p. 128.
[21] This point is made with great clarity by Haberler, *ibid.*, pp. 125-127.

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[18] Robert A. Gordon, "Fiscal Policy as a Factor in Stability," *The Annals of the American Academy of Political and Social Science* (November, 1939), p. 112.

tialities of investment can be charged with the ruthless thwarting of enterprise which prevails in the fields of foreign investments and international trade? Even an exponent of "Beggar-my-Neighbour Remedies for Unemployment" emphasizes that the conditions necessary for short-run advantages are complex, and that such "remedies" defeat themselves in the long run by provoking retaliation.[19] I do not need to expatiate upon the lets and hindrances to investment involved in some of our domestic policies since these have been sufficiently exposed, frequently with suspicious zeal.

In addition to objective or institutional, there exist also psychological impediments to real capital formation, but few of them arise spontaneously or persist independently. Particularly is this true of liquidity preference. Most hoarding springs not from miserliness but from insufficiently attractive alternatives. If, indeed, accumulation outstrips improvement, there may be a psychological resistance to low interest rates. But if there is no prospect of a reversal of the situation, few potential investors will continue the hunger strike; as Haberler remarks, "After a while even John Bull will become accustomed to 2 per cent or 1 per cent."[20] The same observation holds regarding a possible general abatement in the venturesomeness of entrepreneurs, particularly in large corporations through the spread of professional entrepreneur-manager control divorced from ownership. Eventually the investor would be forced to a recognition of realities: that he cannot eat his cake in the form of conservatism and security and also have it in the form of the high returns to be expected only from assumption of marked risks. For the rest, the so-called "psychological impediments" are not distinguishable from objective conditions. There is no native instinct not to invest, though there is the subjective reflection of difficulties engendered by rigid costs and prices, monopoly, and other "real" factors.

The third set of obstacles envisaged by the theory of equilibrium with less-than-full employment is supposed to stem from inelasticity or lack of sufficient magnitude in the underlying technological schedule of capital productivity or efficiency. This I believe to be the weakest paragraph in the brief, the least eligible for a synthesizing analysis. In the first place productivity or efficiency pertains only to actual investment—not to saving which bogs down in abortive lacking, losses, hoards or attempts to hoard. There can be no obstacle to investment from the shape or position of the demand function itself; at most it would mean that, if there existed an institutional or psychological floor to interest rates, we should reach equilibrium with less employment than we should with greater elasticity or magnitude in the demand for capital. Eliminating such a floor on the basis of the improbability of continuous absorptions into liquidity reserves,[21]

[19] Joan Robinson, "Beggar-my-Neighbour Remedies for Unemployment," *Essays in the Theory of Unemployment* (New York, 1937), pp. 210-231.
[20] Haberler, *Capital Formation, op. cit.*, p. 128.
[21] This point is made with great clarity by Haberler, *ibid.*, pp. 125-127.

we are bound to conclude that inelasticity or small extent in the capital demand function signifies only low interest rates—not idle men and machines. Some persons in lower income brackets would suffer through reductions in insurance and annuity benefits and the shrinkage of income from endowments; but in general low interest would mean a welcome reduction of inequality and living by owning.

But the alleged inelasticity or limited demand from a technological angle is itself subject to grave doubts. Looking forward, the stagnation theorists have felt gloomy at the prospect of capital-saving inventions. At most this is merely a possibility. Why should it be a gloomy one? Laborsaving inventions like the linotype have sometimes resulted in a greater demand for labor; by the same token, capital-saving improvements may actually increase the demand for capital at given rates of interest. But if demand for capital and interest rates fall, would not the relative and absolute incomes of labor be increased and inequality diminished by its increased relative importance in production? Looking backward, the pessimists have observed, as in the Temporary National Economic Committee hearings on saving and investment,[22] a close correlation of national income and new expenditures upon mining and manufacturing equipment. Since the World War, it is pointed out, capital outlays have gone heavily into "nonbusiness" lines of production—houses, roads, and public works; but because investment has not gone precisely into the narrow category of "mining and manufacturing equipment," even the halcyon twenties fall under the baleful characterization of stagnation prevented only by special circumstances. If we include these nonbusiness capital goods under investment, then the secular stagnation of investment is a matter of one decade, scarcely to be distinguished, so far as we can perceive thus far, from an unusually severe or prolonged cyclical movement.

Why should umbrage fall upon nonbusiness lines of production? Man shall not live by blast furnaces alone. Is there anything more natural than that society should take its increased income in more of durable consumers goods, or eventually also in more non-durable consumers goods and leisure? Is an increase of demand for non-durable consumers goods—an increase in the "propensity to consume"—a way out of stagnation, but an increase in demand for durable consumers goods not? The plain answer is, of course, that employment of labor need not depend upon investment in mining and manufacture. As Professor King insists, "As long as the modal family income in the United States is under $1,000 per year, there certainly is no need to conjure up wants for new and unknown products or to establish new industries in order to find a market for far more goods than our

[22] Cf. *Tables and Charts for Use in Hearings on Savings and Investment before the Temporary National Economic Committee,* Securities and Exchange Commission (lithoprinted, 1939); and the testimony of Hansen and Currie on May 16, 1939, as given in Releases No. S10 and S12.

present industries can produce."[23] Residential real estate has shown negative net investment for nearly a decade, according to Kuznets' figures, and there were even minuses in the years 1935 on.[24] If we include durable consumers goods within the pale of investment, potential increases in the demand schedule for capital would appear to be very great. And if we include as possible destinations for increased national income also non-durable consumers goods and personal services, the bogey of lacking technical applications for capital disappears.[25]

The inevitable objection to this sort of argument will be that existing plant, having been constructed upon expectations of continued expansion along the old lines of population growth, etc., now suffers under a dearth of demand. What does it avail to point to the possibilities of profitable production with a totally recast orientation of outlets and physical equipment, when it is the obvious necessity that existing plant be profitably employed? I should heartily welcome such a response for actually it contributes to the middle-ground theory, to the truth between extremes, being sought for. The objection makes its contribution in abandoning the thesis of an ultimate or underlying lack of demand for capital goods, and by stressing the inappropriateness of the present supply or stock of instruments. This inappropriateness of present supply is a horse of considerably different color from the Keynesian lack or inelasticity of demand for capital. Actually the situation may be further resolved into its components. Part of existing instruments of a specific sort are worthless—not capital at all; whereas another part of less specific sort has a high potential productivity, because the recasting of production makes heavy demands for new equipment. The realization of this potentiality encounters institutional obstacles in the narrower sense: rigid costs, monopoly inertia and restriction of the field of investment, disproportionate risk-loadings outside the gilt-edge security market, and the like. Antitrust measures and plans to increase the availability of credit help, no doubt; but government investment appears to be the most powerful weapon against monopoly prices and wages, and against institutional inertia in general. Whether the system of private enterprise is inherently impotent in the contemporary scene, whether it is itself an institutional obstacle, and whether the entry of government into investment spells socialism—these are questions which will ultimately find their own answers.

In concluding upon the supposed technological obstacles or lack of demand for capital, let us return to a passage quoted at the outset of these remarks: "A society . . . . which saves, can escape a progressive fall in income and employment only through the continuous development of new investment outlets, such as are created by technological progress, the rise

[23] King, *loc. cit.*, p. 617.

[24] Simon Kuznets, *National Income and Capital Formation* (New York, 1937), p. 48; National Bureau of Economic Research, Bul. 74 (July, 1939), Table I.

[25] According to Keynesian terminology, anyone who employs labor invests!

of new industries, the discovery of new resources, the opening up of new territory, and the growth of population." I disagree. A society which saves can escape a fall in employment and income if it can successfully cope with institutional obstacles; new investment outlets exist in adequate volume in known but unexploited techniques without the necessity of the various creations in the list; and I do not believe that we want those created outlets particularly—in some cases not at all. Technological progress! Is the crying need of economic society today our ineptness in making things? Is agriculture archaic, our commerce unprogressive? Granted that we generically desire to reduce production costs, here, too, we encounter frictions and institutional obstacles. Have we, for example, entirely forgotten about technological unemployment? New industries! Is the variety and quality of our wares sadly limited? New resources! Do we in the United States chiefly suffer from an inadequacy of natural resources? Territory! Do we too need a Manchuria, Abyssinia, or Czechoslovakia? Growth of population! Do we propose to cure unemployment by encouraging the birth rate? So much emphasis has been laid upon the retardation of population growth rate that some lines written by Hicks deserve repetition: "One cannot repress the thought that perhaps the whole Industrial Revolution of the last two hundred years has been nothing else but a vast secular boom, largely induced by the unparalleled rise in population. If this is so, it would help to explain why, as the wisest hold, it has been such a disappointing episode in human history."[26] I do not think it can be gainsaid that technological improvement or population growth eases the savings-investment process, given the institutional obstacles. But the main question is: how do we want to mend matters?

The economic policy based upon the present attempt at finding a middle-ground truth takes up the positive contributions and rejects the extravagances in both the oversaving and classical positions. Such a policy is not directed toward the reduction of saving nor the conjuring up of created investment outlets; it is directed against those factors which both wings of theoretical opinion envisage as impeding the flow of saving to investment—price rigidities, monopoly, inequality, political obstacles to free private enterprise and initiative. The philosophy is liberal in that it seeks to rehabilitate and perpetuate private enterprise and competition; but it is also radical. In the first place, it accepts extensive government expansion into the field of investment as a means of breaking industrial and labor union monopolies and price rigidities, and as a means of launching production to correspond with the social wants of a relatively high-income country—into slum clearance, hospitals, recreational opportunities, free public education, and the like. In doing so, the state must seek to compete with private, competitive industry directly as little as possible, and it must avoid a ruinous indirect competition through failure to charge to its projects their full op-

[26] Hicks, *Value and Capital*, p. 302, n. 1.

portunity costs in labor, land, and capital.[27] The creation of a separate capital budget for public investments would eliminate the anomaly of charging capital expenditures to current income;[28] on the other hand, since the breaking into monopoly profits might show some handsome returns upon the public ventures, it might be wise to record that fact also. In the second place, inequality of wealth and income must be vastly decreased. Investment opportunities for capital and careers open to the talents must be widely distributed if a system is to be competitive. If business interests adopt an attitude of irreconcilableness, they prolong and intensify unemployment and sew the seed of crack-pot schemes for "30-Thursday," "share the wealth," or social revolution.

The role of monetary policy in the indicated direction of public policy is modest but an integral part of the whole. Schemes for curing symptoms by penalizing the holding of cash balances will be rejected, while a policy of easy money is continued so long as investment lags. Since we have the curious combination of idle men and machines as a heritage from the Great Depression and at the same time the possibility of a war boom of large proportions, constant alertness to price-level movements, price differentials, security values, inventories, physical production, and other indices of cyclical variation will continue to be requisite. So far as contributing to the solution of continued unemployment is concerned, the functions of monetary policy, outside the avoidance of a runaway prosperity fever, are two. The banking system can continue and even increase its activity in putting idle savings at the disposal of government investment, assuming that this investment is animated by the purpose of breaking monopoly, cost rigidities, and the inertia of enterprise in directions of public demand. Action by the banking system in this respect is, however, clearly limited by its responsibility for cyclical developments, especially currently in view of the volume of excess reserves. In the second place, carefully articulated plans are not wanting for increasing the availability of credit without heavy risk premia to small enterprises and second- and third-rate credit ratings—plans, for example, of academic specialists such as Leonard L. Watkins, of publicists such as Guy Greer, and of political economists such as Adolph A. Berle.[29] The success of such plans depends, of course, upon a rational articulation with monetary policy in general, and with the investment, taxation, relief, and labor policies of the government. Promising lines of attack upon the persistence of unemployment and the lethargy of investment are, however, for the most part beyond the province of the banking system and the monetary authority. The [illegible] function is of flexibility. See discussion

[27] In this respect the plan of A. A. Berle falls short; cf. "A Banking System for Capital and Capital Credit," TNEC Release No. S11 (May 23, 1939), p. 14.

[28] Cf. Gordon, *loc. cit.*, p. 113.

[29] Cf. L. L. Watkins, *Commercial Banking Reform in the United States* (Ann Arbor, Michigan: Michigan Business Studies, 1938) 8, 5, pp. 56-70; Guy Greer, "America's Greatest Need Today," *Harper's Magazine* (December, 1939), pp. 1-13; Berle, *loc. cit.*

DISCUSSION

RAY B. WESTERFIELD: Here is a diversity of recommendations of monetary policy. Several policies recommended by one speaker are rejected by another. Most of the policies followed by the Roosevelt Administration are rejected. There is little sympathy with the stagnation doctrine, with government spending on a long-time basis, with promoting recovery by easy money, or with giving monetary policy a dominant role in control of national economic activity.

Probably the most striking agreement is on the desirability of reducing the role of the government in monetary management: Beckhart would have none of it; Graham would prefer an automatic monetary standard to a managed standard; and Ellis would restrict government activity to breaking down institutional obstacles to the flow of savings into investment. This agreement represents a reversion from the recent propensity to load the government with monetary powers and expect great accomplishment. The reversion is in line with thought in other fields of activity, and is perhaps born of frustration, and disillusionment, the task proving too big and complex for simple solvent, the government having failed to act according to premise, or the theory underlying policies having failed to work out as expected.

To my way of thinking none of the three take sufficiently into consideration the practical difficulties in the application of their recommendations under present conditions. Surely it is impossible to shift from the basis of quantitative control to the basis of qualitative control, in whole or even large part. With the total volume of eligible paper in the portfolios of the Federal reserve banks amounting to only 3 million dollars, out of total assets of 19 billion for the Federal reserve banks and of 74 billion for the banks of the country, and with excess cash and bank balances of 16 billion dollars and no likelihood of members borrowing from the reserve banks in the near future, it is difficult to see how any control can be exercised by qualitative considerations. To enforce the rule that banks match their total demand deposits by cash and self-liquidating paper and dispose of the non-self-liquidating loans and investments in excess of their savings deposits would be ruinous to the banks. The qualitative scheme of control is too simplified to match requirements. Demand deposits are not, as implied, created solely or even largely nowadays by the loan process, and it is physically impossible to find new loans sufficient to match the deposits caused merely by gold imports.

Even in more normal times the qualitative method of control has a significant weakness in that it does not have in itself the means of discovering that an inflation is in progress. The mere test of self-liquidation ignores price change—or self-liquidation is more assured if the trend of prices is upward. Quantitative tests must be employed to determine whether inflation is in progress and whether it has reached a dangerous scale. Qualitative tests cannot be depended upon to anticipate inflation or maldistribution of credit as among the industries or regions, especially under our decentralized system of unit banks. It seems to me that credit control can be made effective and safe, if at all, only through happy combinations of the quantitative and qualitative devices.

The proposals of Ellis are that the government intervene as much as or even more than at present in the investment field, that it finance its deficits as much

as or even more than at present through the commercial banks, assuming that this intervention and this use of commercial bank funds are strictly for the breaking down of institutional obstacles to the flow of savings into investment. He also fails to give due consideration to the practical difficulties in carrying out such a program. I thoroughly commend his taking a middle-ground course, rather than going along with the stagnationists, but how in actual practice can intervention in the investment field and in general industry be held strictly to the breaking down of monopolies of industry and labor and price rigidities and how can intervention be expected to withdraw when such breaking down has been accomplished? The political forces driving the government deeper and permanently into intervention are so strong that it is difficult to believe it can be stopped this side of socialism. We are familiar with the last seven years of effort at breaking down alleged obstacles to the flow of savings into investment; it is doubtful whether more obstacles have not been erected than broken down. In any case, such breaking down is better accomplished by direct means than by the indirect way of monetary policy.

Finally, Graham frankly states that principal objections to his proposed scheme of composite-stored-goods unit of monetary value are along lines of administrative convenience and cost, and he makes no pretense of considering them. They seem to me to be so big as to defeat the practicability of the scheme.

The three speakers have also not addressed their recommendations directly to the problems of credit control that immediately face the country. The problem of idle money is considered by only one of the papers, the problem of finding loans and investments for an overdeveloped banking system is not touched by any of the three, nor is the problem of gold importation and purchase, nor the problem of silver purchase, nor the problem of deficit financing. Surely all recommendations of monetary policy ought to start from the conditions that exist and ought to aim at resolving the immediate problem, and not treat the subject as if it were to be applied in a vacuum or in standardized or well-fitted conditions. Whatever new policy is adopted must be carefully adjusted to the existing monetary situation and a process of working out the reform must be charted. The three papers do little to this end.

Redvers Opie: A formidable task of selection and compression is presented in commenting, for three minutes each, on three papers so pregnant with suggestion as those which we have just heard. Therefore I propose to waive further appreciative courtesies and state my comments.

In general, all the papers exhibit welcome signs of that temperate eclecticism which springs from paying proper respect to other people's ideas, which will appear as orthodoxy to some and theoretical conservatism to others. All express or imply a realization of the complexity of the economic system which makes the problem of monetary policy so complicated; and which arouses the suspicion of economists regarding generalizations which cover up the complexities and point to simple criteria in directing monetary policy. They do not fall for that kind of economic reasoning which implicitly rests on the assumption of miraculous instantaneity in the operation of economic forces and then pretends to lay directly the foundation for controlling economic processes in the real world.

Professor Graham is heterodox in his orthodoxy: he champions the cause of a

constant price level as the criterion of monetary policy, using as his new weapon of defence one forged out of the 100 per cent reserve plan and the idea of a composite commodity as the money stuff—we might call it for short "symmodity" money. I have not read Benjamin Graham's book, but it looks as if Professor Graham turns to that plan in desperation. He is convinced that "an appropriate type of money will either maintain full economic activity without alterations in the value of the monetary unit, or that this cannot be done by any monetary manipulation whatever, and that the problem must be attacked by other means." Symmodity money is the only kind which holds out any hope. The objections to it in Professor Graham's view lie in administrative difficulties and the attendant costs, about which he frankly confesses his doubts.

On the surface the administrative difficulties are appalling. I infer that Professor Graham would include many commodities in his list, since he would make it acceptable to most if not all countries. The index number problem is then upon us with full force. The constituents of the composite commodity would have to change with technical progress and shifts in tastes. Think of the complications involved, first, in collecting by exchange processes the desired number of units of the rightly constructed composite and, second, in providing for storage, delivery, or earmarking.

The problem must certainly be "attacked by other means" before we embark upon that revolutionary enterprise.

Professor Beckhart hints at one point in his paper that the quantitative and the qualitative methods of control are not mutually exclusive, but deal with different aspects of the same problem. If I am right in detecting this olive branch, then I am sympathetic to his thesis, which I should interpret as a plea for sound banking —and we all admit that there is a problem of bank reform—or as a plea for distinguishing between, and perhaps separating in fact, the money market and the capital market.

But if Professor Beckhart's confession of agnosticism, when he says that the "quantity of purchasing power a country requires in the form of bank deposits . . . . [cannot] be determined mechanistically" means that we cannot usefully consider the problem of what the monetary authority should do to affect the total quantity of money in the system, then I think he goes too far. If the sole responsibility in extending credit rests with the individual bank, the central authority having performed its inspecting functions to ensure high quality and perhaps provided an information service to assist in appraising credit-worthiness, then it is not worth applying the name monetary policy to what is left for the central bank to do. The central bank would simply passively provide whatever cash base the public demands upon the commercial banks warranted.

On the other hand the difference may relate merely to the use of terms. If monetary policy were shorn of its fascinating complexities simply to make room for the related concept investment policy, which would embrace all problems of public investment, of the budget, of interest rates and of national policy in general, there would be nothing to lament and perhaps a gain in clarifying ideas.

Professor Ellis in his sober *via media* agrees with Professor Beckhart that monetary policy has a modest part to play; but he faces up to the problems which remain when the commercial banks have been purged. He refuses to be stampeded

by the savings bogey into accepting one or two quick cures for all economic ills. Instead he, perhaps most of the three, emphasizes the complexities and therefore the organizational problems which cannot be made to vanish into thin air by a touch—or even a whack—of the monetary wand. I should go further than Professor Ellis does overtly and make out the case for increasing the production of social goods on its merits, not necessarily as an adjunct of monetary policy; nor am I sure that government expansion into the field of investment is necessary to break down monopolistic rigidities; but such emendations are minor.

Professor Ellis sees the necessity of some system of costing in government expenditure, but he sees the impossibility of economists arguing in the light of history that the functions of the state should not be extended, and the impossibility of refusing to admit that these functions impinge upon and include in themselves monetary policy.

Raymond J. Saulnier: As regards the problem of stating the aims of monetary policy several points are clearly illustrated by the foregoing papers. First, any attempt to state the objectives of monetary or credit policy reveals at once that there is not one but a whole set of objectives to be attained. Second, it is clear that if a given statement of policy is to be useful in an operational sense it must be so stated that it can be clearly seen and acted upon. No other kind of an objective makes any sense as a practical matter. Third, and I think this is illuminating to the whole discussion of monetary policy, the fact that objectives are often set forth as ultimates—about the nature of which few disagree—serves to cover very basic differences. Finally, Professor Ellis's paper in particular shows quite clearly that monetary or credit policy is considered properly only when viewed as part of a larger pattern of social action that runs deeply into the vitals of a system of private enterprise.

Professor Beckhart and Professor Ellis agree that the ultimate objective of credit policy is to maximize production at minimum real costs. But as is so often the case the agreement goes little beyond this statement of an ultimate objective. According to the qualitative theory of credit control as stated by Professor Beckhart, reaching this objective would require complete reliance on taxation and voluntary savings for what he terms a balancing of the budget, while for Professor Ellis, correcting the under-utilization of factors requires that the government launch a program of investment intended to meet social wants inadequately satisfied at present and by this means to make use of the "idle savings" accumulated in the banking system. This contrast illustrates how it is possible to agree on the matter of ultimate objectives and to disagree basically with regard to the implementation of policy. The two views involve different conceptions, not only of the meaning of the word savings, but also of the role of the state in human affairs. As Professor Beckhart uses the word savings I believe he has reference to the total capital account of commercial banks and other financial institutions plus time deposits; that is, the sum is measured by reference to bank liabilities. As Professor Ellis uses the term idle savings, he refers, I believe, to bank assets; that is, to the cash position of the banking system. Professor Ellis's prescription calls for more government borrowing and the sale of government securi-

ties to the banking system, while Professor Beckhart's position would mean a definite retrenchment in this type of financing.

Both of these proposed programs present special problems with which we are all fairly familiar. I would like, however, to comment briefly on the program advanced by Professor Ellis. I find myself in complete sympathy with his attempt to make a synthesis of the opposing views regarding the future prospects of private investment and the factors which govern its flow. But I am doubtful that any of us has yet dealt satisfactorily with the basic problem: Can we reconcile an increasing participation of the state as a producer in our economic system with what we loosely term the system of free private enterprise. In this connection it is interesting that Professor Ellis has suggested that a still unsettled problem of political economy is whether private enterprise is not itself an "institutional obstacle" standing in the way of an appropriate flow of private investment and thus of income and employment. It may be true that, as Professor Ellis points out, this question will ultimately find its own answer but we, unfortunately, cannot leave the problem to the future.

I am convinced that we cannot avoid the necessity of the program of social investment which Professor Ellis sponsors without a human cost that no system of government and hence of business enterprise could stand. It involves not a new departure but a broadening or widening of the already socialized sector of the economy. But I am also convinced that the sphere or area within which that investment is to be projected must be clearly marked. Within that area it may be possible for the program of social investment to direct pressures against price and cost rigidities and thus act to free the flow of private capital. However, the efficacy of this device for raising investment demand rests, in turn, as a long-run problem, on our ability to direct social investment into uses that will not themselves serve as obstacles to the flow of private investment. Finally it is becoming increasingly clear that unless taxation and labor policies, in particular, are harmonized with public investment policy, the latter can do but little to promote a higher level of private investment.

ECONOMIC ISSUES IN SOCIAL SECURITY POLICY

THE IMPACT OF SOCIAL SECURITY LEGISLATION UPON MOBILITY AND ENTERPRISE

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I

By the mobility of labor I mean the willingness and the ability of labor to move from one employer to another, one place to another, or one occupation to another in response to changes in the demand for labor. Mobility must be distinguished from movement because much movement is initiated by the employer through layoffs.[1] Some movement is necessary in order to achieve an optimum distribution of resources, but movement in excess of this amount is wasteful.[2] When people wonder about the effects of social security legislation upon mobility of labor, they are usually fearful that social security will prevent the movement from reaching the optimum amount. The probable effects of the social security program upon mobility must be analyzed in the light of the amounts and kinds of mobility in the American labor market and of the conditions which determine mobility.

The American labor market is only beginning to be explored. Nevertheless, I feel safe in asserting six propositions concerning the mobility of labor: (1) the majority of the working population are relatively stable and do little moving either between employers or places and probably between occupations; (2) the amount of movement in the labor market is large, and, indeed, is much larger than is generally suspected; (3) the amount of movement from employer to employer and from place to place is declining; (4) the character of movement has been changing from a voluntary to a forced movement; (5) the obstacles to movement between employers are increasing; (6) changes in managerial policy and the spread of unionism are tending to increase the proportion of layoffs that are temporary rather than permanent, to reduce the proportion of casual work, and to sharpen the distinction between regular and temporary employers.

Twenty-five years ago, when labor turnover was first studied, most employers thought that it was of negligible importance, despite the fact that it turned out to be about 100 per cent a year. The employers were misled by the concentration of turnover among a small part of the force—usually one fourth or less. Although the number of separations might be as large as the force itself, from two thirds to three fourths of the names on the

[1] Hence increases and decreases in movement do not necessarily mean increases or decreases in willingness or ability to move.

[2] Movement of both capital and labor is, of course, necessary in amounts determined by the relative costs of moving each. Movement is to some extent necessary in order to develop men.

pay roll at the beginning of the year would be there at the end. Today the nation suffers from the same optical illusion. It still seems to be true that in any given plant from two thirds to three fourths of the employees do not move in the course of a year. The prevalence of geographical stability is suggested by the Michigan study of mobility which indicates that during the fifty-seven month period from April, 1930, to January, 1935, 87.1 per cent of the workers did not make the kind of geographical change defined as movement for purposes of the study.[3]

Despite the fact that the great majority of the workers do not move, the amount of movement is large—much larger than most people have supposed. Evidence is found in the figures on business births and deaths, in the labor turnover figures, in the large movement between agricultural and nonagricultural pursuits, and in the large number of account numbers issued by the social security administration. Business births and deaths run each about 400,000 a year. Many of them represent merely a change in ownership, but special studies indicate that there are about 200,000 births of new going concerns each year and almost the same number of deaths. The average number of employees in the 2,000,000 nonagricultural enterprises is between thirteen and fourteen. It is probable that the infant concerns and also the dying concerns have less than the average number of employees. If we assume that the average dying concern has less than half the average number of employees, say about five, 200,000 deaths would produce 1,000,000 terminations a year. If new concerns on the average have four employees at the end of the first year, they would represent the employment of about 800,000 persons.[4] The separation rate in manufacturing industries in 1936 was 40.35 per cent, in 1937, 53.11 per cent, and in 1938, 49.22 per cent. As temporary layoffs are not ordinarily included in separations, these figures represent terminations of employment with the enterprise. The movements of labor between agricultural and nonagricultural pursuits are not accurately known but appear to be large. Woytinsky estimates that the number of farmers working in nonagricultural pursuits reaches a peak of about a million and a half at the turn of the year and that the seasonal demand for hired help by farmers rises in July to nearly a mil-

[3] *Monthly Labor Review*, April, 1939, pp. 789-802.

A person was considered to have made a move whenever his work history showed a change between communities under one of the following circumstances: (1) between places of work, when the person was employed both before and after moving, (2) between places of residence, when the person was unemployed both before and after moving, or (3) between place of work and place of residence, when the person was employed at one end of the move and unemployed or not seeking work at the other, provided in this case that the move was longer than between adjoining counties. This restriction was adopted because short-distance moves between employment and unemployment were usually of the "commuting" type which did not involve a definite transfer of workers from one labor market to another.

[4] Concerns which die are likely to have a considerable shrinkage of employment for several years before their death. Likewise, some new enterprises grow rapidly for the first few years. Of course, a very large proportion of concerns have a life of less than a year.

lion and a half over the level of January and February.[5] The number of account numbers issued by the social security administration is about 60 per cent greater than the number of persons employed in the covered industries.[6] Allowance must be made for the fact that many account numbers have been issued to unemployed persons, that many holders of account numbers have retired or died, and that a few duplicate account numbers were issued. Nevertheless, Woytinsky estimates that during 1937 and 1938, 9,600,000 persons who usually work in employment not covered by the old age pension tax were engaged at least part of the time in covered employments.[7] This does not include the persons who receive temporary or intermittent work entirely within covered employments. Probably one fourth of the country's labor force in any one year works for more than one employer. Many of these workers are employed in more than one industry. Lack of definite information about who these workers are and what is the pattern of their employment is a most serious gap in our information about the labor market.

The amount of movement from employer to employer and probably from place to place is declining. Before the war, separation rates of 100 per cent were normal. In 1920, separations in manufacturing started to decline. By 1929, the rate was less than half the level of 1920.[8] During recent years the changes in the total separation rate have been moderate, but the general drift has been downward with the rate for 1937 definitely below 1930. Evidence of changes in the amount of movement from place to place over time is scanty. There are several types of geographical movement and they may not be changing in the same direction. However, the estimates of the Department of Agriculture show a decline in the farm-city movement from 10.8 millions in the five years ending in 1928 to 5.6 millions in the five years ending in 1938, and in the city-farm movement from 7.7 millions in the first period to 3.9 millions in the second.[9]

Not only is the amount of movement declining, but its character has changed during the last ten years from predominantly voluntary to predominantly involuntary. This change does not go back beyond 1929, and it remains to be seen whether it is the result of temporary conditions. Until 1929, the turnover reports of the Metropolitan Life Insurance Company showed that over 70 per cent of the separations were resignations. Layoffs constituted about 15 per cent, and discharges about 13 per cent. In 1936,

[5] W. S. Woytinsky, *Seasonal Variations in Employment in the United States*, p. 95.

[6] At the end of 1939, 47,500,000 account numbers had been issued. The number of persons whose usual employment is in the covered industries was about 27,500,000 at the end of 1938, and about 28,500,000 at the end of 1939.

[7] W. S. Woytinsky, *Fluctuations in Employment Covered by the Federal Old-Age Insurance Program*, p. 75.

[8] *Monthly Labor Review*, July, 1929, pp. 64-65.

[9] These are movements of persons, not necessarily workers, but the movement of workers may be expected to be roughly proportionate to the movement of persons.

61.2 per cent of the separations were layoffs, in 1937, 67.3 per cent, in 1938, 82.2 per cent. In 1937, scarcely one out of four of the quits was a resignation, and in 1938, scarcely one out of seven.[10] Layoff rates today appear to be higher than before the war or before the depression. The reason in the main is the drop in the resignation rate which prevents employers from letting resignations produce adjustments in the size of the force.

In some respects movement is easier today than ever before. The automobile and the greatly improved public employment offices facilitate movement both between employers and places. On balance, however, the obstacles to movement seem to be increasing. The greatest change in recent years has been the spread of union rules governing layoffs and to a less extent hiring. Equal-division-of-work rules discourage involuntary movement because they limit layoffs. But equal-division-of-work rules also reduce the number of hirings and this discourages resignations. Seniority rules discourage resignations because new employees in a plant must start at the bottom of the seniority list. Furthermore, when the seniority rule provides, as it often does, that workers with seniority status shall be given preference in hiring, it discourages the movement of workers who have been laid off. The depression has greatly stimulated the interest of workers in protecting themselves against layoffs. Among several hundred union agreements negotiated between 1923 and 1929 only about one out of three contained regulations of layoffs. Among another group of several hundred agreements negotiated since 1933, two out of three regulated layoffs.[11]

When a seniority rule provides that the workers laid off shall be rehired, if qualified, before other persons are engaged, it has the effect of converting permanent layoffs into temporary ones.[12] Whenever a union imposes an equal-division-of-work rule it is necessary to define clearly the persons who are entitled to share in the work. This brings about a sharp distinction between temporary and permanent workers. A seniority rule has the same effect because temporary workers are usually denied seniority status, especially with respect to rehiring. Sometimes a closed shop sharpens the dis-

[10] Deaths and retirements (the latter not always entirely voluntary) are included in resignations. The resignation rates in manufacturing are today only one fifth to one tenth of the prewar resignation rates.

[11] The experience of union officials confirms these statistics. An international officer in one of the paper unions says: "When we first began to sign agreements with paper manufacturers, seniority was not much of an issue. However, since the depression, this question of seniority seems to loom larger in the workers' minds than anything else. It is very difficult to write a satisfactory seniority clause in a trade agreement. As a matter of fact, if employers would agree to let us write our own seniority clause, I do not believe the union could write a clause that would be satisfactory to all our members."

A high official for many years in one of the unions of the glass industry says: "I have been in the glass industry for over a generation and never once had to work under the seniority rule. That came into the trade union movement after I had given up active work in the glass factory. When getting around the country I find that this is the paramount question in local meetings. It seems to overshadow all other questions before the group."

[12] Such a rule may attach a large number of persons to a plant in hope of sometime being rehired.

tinction between regular and temporary employees because the union may not require that temporary employees be members. The general tendency of trade agreements, therefore, seems to be (1) to reduce the proportion of permanent layoffs, (2) to reduce the amount of work done by temporary workers, and (3) to sharpen the distinction between regular and temporary workers. It is not clear, at this stage of development, that union layoff and hiring policies cause an excessive number of men to be attached to union plants or industries. Probably they do.

II

It is against this general setting that we must appraise the effect of the social security program upon the mobility of labor. We must consider separately the effects of (1) pensions, (2) unemployment compensation, and (3) relief.

1. The pension plan will tend to encourage mobility. In the first place, it will lead to retirements at an earlier age and the vacancies thus created stimulate movement.[13] In the second place, it will permit employees to move from one employer to another without losing pension rights. Practically all of the private pension plans which sprouted so luxuriantly during the twenties and in the early part of the depression were carefully designed to discourage movement. The man who left lost all of the employer's contribution and in some instances his own. Private pension plans will continue to supplement the public pension plans for some years to come and they will tend to discourage movement. Their effect, however, will be limited by the public pension plan.

2. The brief experience with state unemployment compensation schemes indicates that their effect upon mobility will be small. Experience rating will cause the conversion of some intermittent or casual employment into regular employment.[14] This will reduce the amount of movement but not the willingness to move. Some of the unemployment compensation acts give employers an incentive to spread work rather than to make layoffs. This will reduce involuntary movement and indirectly voluntary movement. There are two principal reasons for concluding that unemployment compensation will have little effect upon mobility. One is that most of the men who qualify for benefits are in the stable rather than the mobile group of employees. The provisions concerning qualifications vary. Of the states specifying definite minimum earnings during a specified base period (usually the preceding year), only seven put it below $200,[15] and of the

[13] In a majority of cases this movement is a forced rather than a voluntary one. The employer feels able to retire men earlier because the men are provided for by pensions. This, indeed, has always been one of the principal arguments used by insurance companies in selling pension plans to employers.

[14] This will not be true, however, if the layoff of workers who have not qualified for benefits is not counted in measuring experience.

[15] Rhode Island, $100; Delaware, $125; South Dakota, $126; North Carolina, $130; Idaho, $140; and Maine, $144.

states requiring earnings of a given multiple of weekly benefits only fourteen require earnings of less than twenty-four weeks' benefits.[16] A large part of the people who constitute the mobile part of the working force will not qualify for many weeks' benefits.[17] Sample studies of the people who are receiving unemployment benefits indicate that they do not ordinarily suffer long periods of unemployment and that few of them have ever been on relief. Many of them have only been temporarily laid off, they have not lost their check numbers, and they have not lost their jobs. They do not expect to move and they would not move even if they did not receive unemployment benefits, because although they may not have work, they still have jobs. It is this fact rather than the receipt or nonreceipt of unemployment benefits which determines their willingness to move. As indicated above, union policy is increasing the number of persons in this class because unions endeavor to replace permanent layoffs with temporary ones and to give people who have been laid off a right to re-employment before outsiders are engaged.

Another reason why unemployment benefits are not likely to have great effect upon mobility is that they are paid for only a few weeks—fifteen or sixteen in most states. Even if they were paid for twenty-six weeks, the effect on mobility would be small.[18] With the end of his benefits never far

[16] Pennsylvania, thirteen; Arizona, fourteen; Iowa, fifteen; and Alabama, Arkansas, Georgia, Kansas, Louisiana, Mississippi, Missouri, Nevada, New Jersey, Oklahoma, Virginia, sixteen.

Three jurisdictions require a specified number of weeks of employment: Wisconsin, over four; District of Columbia, thirteen out of the fifty-two ending with the last week of employment; and Ohio, twenty in the base year.

[17] Unfortunately there are no figures available on the number of persons laid off who lack sufficient employment or earnings to qualify for benefits. Indeed, the total number of layoffs in covered employments is not known because there are many layoffs for which claims are not presented. In manufacturing, the layoff rate during the first ten months of 1939 was running at the annual rate of 26.45 per hundred employees, a rate probably 20 per cent higher than in nonmanufacturing industries. If Massachusetts experience is representative, there were about 6.5 million (permanent) layoffs in covered employment during 1939. Temporary layoffs are not included in the turnover figures and are more difficult to estimate. The unemployment census of April, 1930, found one temporary layoff to every 3.2 permanent layoffs. This ratio may not be typical as the proportion is likely to vary with conditions in the labor market and even with the season of the year. I suspect that in April, 1930, the proportion of permanent layoffs was unusually high. If we assume, however, that the ratio 1 to 3.2 is fairly typical, the total number of layoffs, both temporary and permanent, in covered industries in 1939 was approximately 8.5 millions. Returns for three quarters of 1939 indicate that the number of layoffs in which unemployment compensation was paid would be about 5.7 millions for the entire year. Apparently, there were about 2.8 million layoffs in covered industries in which no unemployment benefits were paid. In some of these cases the workers had sufficient wage or employment credits, but failed to draw benefits because they obtained employment before the expiration of the waiting period. In other cases the workers failed to obtain benefits because they lacked sufficient wage or employment credits. It is unfortunate that we do not know the number of employees who fall in each of these two classes. All that we know is that there was a number of claims disallowed because of insufficient wage credits. During the first three quarters of 1939, about 10 per cent of the claims from workers who had wage credits in covered employment was disallowed because of insufficient wage credits. In the first quarter the percentage was 12.2, in the second, 8.7, in the third, 9.4.

[18] In Great Britain, for example, where a twenty-six weeks' benefit is paid, it is the relief program rather than unemployment insurance which affects mobility. M. B. Gilson, *Unemployment Insurance in Great Britain*, p. 204.

away, a worker is not likely to neglect hunting for employment. It is significant that in England only about one out of four vacancies is filled by the public employment offices; most of the men get their own jobs.[19] Undoubtedly, unemployment benefits will cause the unemployed worker to be more particular about the job he accepts and thus may extend somewhat the average period of unemployment.[20] Unemployment benefits may discourage long-distance movement of workers in search of work. It is not likely, however, to discourage the kind of search which a man can now make in his car without failing to report at his local public employment office once a week. Furthermore, it should be observed that in the past there has been much aimless wandering by the unemployed and that this should be discouraged. The transfer of men over great distances should be made by the public employment offices in response to requisitions which cannot be filled in the local market.

3. The main impact of the social security program upon the mobility of labor will occur in connection with relief. Persons on relief seem to be more mobile than persons not on relief.[21] This does not mean that relief usually encourages mobility. Indeed, it probably does the opposite, but relief is most likely to affect the workers who do not belong to the regular working force and who do the most moving—not because of preference but because of necessity.[22] Up to the moment, the effect of relief upon the mobility of labor has not been tested. It can be tested only by a substantial increase in the number of jobs. The effect may be expected to vary with the type of labor. Among the 53,000,000 or 54,000,000 persons who constitute the would-be gainfully employed, there are great variations in employability. Perhaps 10 or 15 per cent have a very high degree of employability and another 10 to 15 per cent a very low degree of employability. Among the 5,000,000 persons of low employability, the effect of relief upon mobility will undoubtedly be great. Payments of $50 a month for twelve months in the year would give probably most of these persons more than they would earn in industry.

[19] The public offices have been endeavoring for some years to increase the proportion of vacancies which they fill and with moderate success. In 1926, the proportion filled by the public employment offices was about 18 per cent. In 1932, it was 21.2 per cent; in 1933, 26.6 per cent; in 1934, 24.8 per cent; and in 1935, 26.9 per cent. Cornelia M. Anderson, "British Employment Exchanges," *Harvard Business Review*, XVI, 96.

[20] Even in bad years, there is a considerable amount of hiring. In both 1931 and 1932, for example, the number of hirings by manufacturing establishments included in the sample of the Bureau of Labor Statistics, was over three fourths as large as the number of separations. In 1931, the monthly accession rate was 3.05 per 100 employees on the pay roll, and the separation rate, 4.03; in 1932, the monthly accession rate was 3.32 per 100 employees, and the separation rate, 4.33.

[21] The Michigan study of 149,379 workers showed that 13,621, or 10.9 per cent, of 131,532 not on relief made a geographical move during the period under study and that 4,226, or 17.2 per cent, of the 24,589 workers on relief made a move. (*Monthly Labor Review*, January, 1939, XLVIII, 16-24.) The same conclusion was reached by C. E. Lively and C. Taeuber in their study, *Rural Migration in the United States*, pp. 116-118.

[22] There are some cases in which relief definitely does encourage mobility, but the kind of mobility it fosters is not necessarily desirable. Relief is likely to encourage movement in the direction of relief opportunity rather than in the direction of employment opportunity.

Of course, the persons on relief, particularly work relief, do not necessarily consist of the least efficient 10 per cent of the would-be gainfully employed. The longer the relief program is in operation, however, the more completely its rolls will consist of persons of low employability. Even during the worst of the depression the re-employment rate among persons with a year or less of unemployment seems to have been about 40 per cent among males and even higher among females.[23] Each time someone leaves relief there is a chance that he will be replaced by a person of low employability. No one knows what the chance is. At any rate, if separations from the relief rolls frequently mean the addition of a person of low employability, the relief rolls will more and more consist of persons for whose services industry cannot hope to compete with relief.[24] In other words, precisely the reverse process goes on among the unemployed as goes on in industry. Just as employers by constantly sifting the employed gradually build up a better selected force, so the same process of selection and rejections gradually converts the unemployed more and more completely to a group of low employability. This is how the "hard core" of unemployment is created.[25]

Not only will relief compete effectively with industry for the services of several million of the least employables, but it will hold many thousands of persons in regions where employment opportunities are low, unless operated to encourage movement. The great migrations of human history have been a mixture of pushes and pulls. The strongest push areas in the United States seem to be the Southern Appalachians, the cutover lands, the cotton areas of the Southeast, the dust bowl. There are, however, many cities

[23] *See* forthcoming study by W. S. Woytinsky on this point.

[24] Among the unemployed in Philadelphia, according to the samples collected by the Industrial Research Department of the Wharton School and the Works Progress Administration, the percentages unemployed for three years or more increased as follows:

	Males	Females
1931	2.8	1.8
1932	3.3	2.2
1933	7.9	4.9
1935	34.9	19.6
1936	34.4	27.3
1937	37.7	26.1
1938	25.7	17.5

[25] A hard core of unemployment is bound to be created in any period of unemployment long enough to permit the segregation of the least employables among the unemployed. When the volume of employment fluctuates at only slightly below the labor supply (in other words when unemployment is low) the persons of low employability are not effectively segregated.

Congress has attempted to deal with the problem of the hard core of unemployment in so far as the WPA is concerned by requiring that persons employed continuously on WPA for eighteen months be dropped for at least a month. It is not clear that this is a wise approach to the problem. Possibly the objective of public policy should be, not to keep persons of low employability off WPA, but to take care of them there. That may be precisely the place for them. Certainly work relief is not a good device for taking care of persons whose employability is high and whose unemployment, therefore, is likely to be very short; it is a more appropriate device for taking care of those whose employability is so low that they have slight chance of getting work again in private industry.

which are push areas. Relief may be administered to offset the pushes of these unfavorable environments and to cause people to remain where employment opportunities are poorest. Or it may be used to create movement among those best fitted to move and to encourage the growth of a subsistence economy among the persons who are not fitted to move.

Will not the tendency of relief to keep persons of low employability out of industry and to hold present inhabitants in regions of meager employment opportunities be broken by the first pronounced boom in business? A substantial growth of employment would undoubtedly produce an appreciable reduction of even the long-term unemployed. I venture the prediction, however, that the percentage of the population between the ages of sixteen and forty-five actually at work in gainful nonagricultural employment may expand above the level of the twenties while leaving half or more of the 5,000,000 least employable on relief. The actual result will depend partly upon the wage policies of the country. The United States, however, has enormous reserves of labor not only among the unemployed, but also among the nonemployed; that is, women and young people who are not working and not seeking work. In addition, there are at least 2,000,000 persons attached to agriculture at a low intensity of employment who could easily be drawn into nonagricultural pursuits. Industry will draw heavily upon the nonemployed and upon agricultural workers before rehiring the least employable among the unemployed.

III

Who will bear the cost of the social security program and how will the program affect the wages, enterprise, and employment? As the cost for some years will be met by the pay roll tax, an inquiry into the incidence of the program requires an analysis of the incidence of the pay roll tax. The effects in the short-run (too short to permit the capital of industry to be adjusted to changes in the prospect for profits) must be distinguished from the long-run effects.

It is assumed that the price of labor is too sticky to be immediately affected by a tax on pay rolls. In that event the incidence of the tax in the short run is dispersed in several directions. Since the marginal costs of existing plants in the short run consist of labor and raw materials, an increase in the price of one causes the demand curve of the other to move to the left.[26] Hence, part of the pay roll tax in the short run falls on the suppliers of raw materials. The rise in marginal costs produces an advance in

[26] This point is important also in judging the consequences of wage cuts in times of depression. Even if the demand for labor in the short run is inelastic, wage reductions, by moving the demand curve for raw materials to the right, may cause an increase in disbursements by business enterprises. Since raw materials are largely produced by a group (farmers) who have even a lower income level than industrial workers, wage reductions may increase low-bracket consumer incomes even in those cases where the plant demand for labor is inelastic.

the prices of finished goods so that the cost falls partly on consumers. The rise in the price also limits the quantity sold which means that labor bears part of the cost in the form of less employment. The rise in labor costs and the limitation of the quantity sold means that profits are reduced and that capital bears part of the cost.

In the long run the effect of the pension and unemployment compensation schemes upon enterprise must be judged by the relationship between the benefit disbursements and the collections under the pay roll tax, because the noninsurance schemes (such as old age assistance, aid to dependent children and the blind) must be financed out of the general budget. But since the pay roll tax and the relief schemes were made effective by the same act of Congress, it is more realistic to appraise the immediate effects of the act by considering it as a whole. From the beginning of 1937 to the middle of 1939, tax collections and benefit payments under the Social Security Act were as follows:

	Collections[a] (millions)	Pension and unemployment benefit payments (millions)	Other[b] payments (millions)	Excess of receipts over payments (millions)
1937	$1,184	$ 3	$ 383	$ 798
1938	1,316	404	495	417
1939 (first half)	755	237	273	245
	$3,255	$644	$1,151	$1,460

[a] Includes collections under state unemployment insurance schemes of $586.5 million.
[b] Includes old age assistance, aid to dependent children, aid to the blind.

During 1937 collections exceeded disbursements by 798 million dollars. Perhaps not more than half of the excess of collections over payments, however, fell upon profits and of this perhaps between 300 and 350 million dollars fell upon corporate profits.[27] This was equivalent to an increase of one third of the federal corporate income tax. As corporate profits in 1937 were 3.9 billion dollars, the effect upon profits was moderate. The pay roll taxes had no direct relationship to the downturn in the spring of 1937, but they were an important factor in preventing profits in 1937 from rising above 1936 and so they must have materially restrained the vigor of the expansion.[28] In 1938, the excess of receipts over expenditures was only 417 million dollars, but the effect on enterprise may have been more serious than in 1937. Returns from 167 large companies indicate that profits were less than half the level of 1937. Thus they may have been about 1.8 bil-

[27] This guess may be too low as there was considerable resistance by consumers to higher prices. On this point see my paper, "Corporate Price Policies as a Factor in the Recent Business Recession," *Proceedings of the Academy of Political Science*, January, 1939.

[28] Even in 1937, the best year of the recovery, corporate profits were low—42.3 per cent below 1926, when gross corporate income was virtually the same as in 1937. In fact, only two out of five corporations made money in 1937 as against three out of five in 1926. Perhaps it is true that when profits are very low, the influence of any encroachment upon them is magnified.

lion dollars. If half of the excess of collections over receipts fell on profits, the net income of corporations would have been cut by 10 per cent. Such a cut may well have materially affected investment policy and substantially accentuated the depression.

More serious was the effect of social security taxes upon the railroads, because the roads cannot even temporarily pass on higher costs in the form of higher prices. During the year 1937, the net cost of social security to the roads was about 76 million dollars and their net profits were 98 millions. In 1937, therefore, social security cut the profits of the roads by nearly 44 per cent. In 1938, the roads had a deficit of 124 million dollars and the net cost of social security to them was 67 millions. In this year social security was responsible for 54 per cent of the deficit.[29] It is evident that social security taxes add greatly to the difficulties of this grievously depressed industry.

IV

Who will bear the pay roll taxes in the long run? Three principal theories have been suggested. One is that the tax will produce higher prices so that all nonrecipients of benefits, in their capacity of consumers, will bear it. A second is that the social security program, by producing forced saving, will reduce the rate of interest, especially during the next twenty years. To that extent the cost would fall on owners of capital. A third theory is that the tax will move the demand curve for labor to the left so that the burden will fall on labor.

What is the possibility that the tax on pay rolls will produce higher prices and thus fall largely upon consumers? Keynes and others have argued that, given proper monetary policies, a rise in marginal costs will raise prices rather than reduce output. Higher prices presuppose either an expansion of demand deposits or a rise in their velocity. The demand for demand deposits and the willingness to spend them depends upon the outlook for profits and the scale of operations that businessmen plan as a result. Until an increase in expenditures occurs to raise prices, the advance in marginal cost must be regarded as reducing the marginal efficiency of capital and causing the demand curve for short-term loans to move to the left. Because the demand for short-term loans is inelastic, it is not practical to reduce their supply price sufficiently to prevent the shift in the demand curve from reducing the volume of demand deposits. It is even more difficult by

[29] The Railway Pension Act of 1937 provided that persons on the pension rolls of the railroads should be transferred to the public pension scheme beginning July 1, 1937. As a result, the roads were relieved of pension payments to about 54,000 employees who had been receiving on the average slightly more than fifty dollars a month. The saving to the roads during the second half of 1937 was slightly more than 16.2 million dollars and during 1938 slightly more than 32.4 millions. In estimating the net cost of social security to the roads these amounts must be deducted from the 92.4 millions in social security taxes paid by the roads in 1937 and the 99.5 millions paid in 1938.

reducing the supply price of short-term loans to produce an increase in demand deposits sufficient to raise expenditures and prices in proportion to the rise in costs and thus to restore the marginal efficiency of capital to the level prevailing before the increase in costs. There is slight prospect, therefore, that banking policy will cause the pay roll tax to produce higher prices with no restriction on production and with the cost falling in the main upon consumers and to some extent upon capitalists. If the banking system were able to control the supply price of venture capital, this conclusion might have to be altered.

V

Will the pay roll taxes increase the amount of saving with the result that (1) the amount of capital per worker is increased; (2) the marginal worth of labor (and hence the price of labor) is raised; and (3) the return on capital is reduced? Were these results to follow, the cost of the social security program would fall in the main upon property owners in the form of lower interest rates but partly upon consumers in the form of higher prices.[30]

At one time it was estimated that a pension reserve fund of over 40 billion dollars would be accumulated by 1980. No guesses concerning the size of the reserve a few years hence can pretend to be accurate, but changes in the estimates of costs and changes in the law itself now indicate that the reserve will reach a maximum of roughly 7 billions about 1955. The accumulation of such a reserve will increase the volume of investment-seeking funds by less than 5 per cent a year. During prosperous times the unemployment insurance schemes will run a surplus. The amount will depend upon the terms of the laws, which are still in a state of flux. Perhaps it will be 300 million dollars a year. At any rate during the next fifteen years the social insurance schemes may increase the volume of investment seeking funds by about 8 per cent in good years and perhaps 1 to 2 per cent in bad years.[31] At most periods of the business cycle the demand for investment funds seems to be inelastic, although the demand for funds for housing at times seems to be elastic. If the demand is inelastic, the burden of the social security program for the next fifteen years may fall to an appreciable degree upon capital. After that period, the accumulation of the old age reserve will cease and the burden on capital from the shift in the supply curve of investment funds to the right will be negligible.[32]

[30] It would fall partly upon consumers because there is a connection between long-term and short-term interest rates. Hence the forced saving which reduced long-term interest rates would produce some increase in short-term funds and some increase in demand deposits and prices.

[31] During the next fifteen years the liquidation of the unemployment insurance funds in times of depression will not quite offset the accumulation of the old age reserve.

[32] The liquidation of the unemployment insurance funds during periods of depression will provide an outlet for savings and help support the rate of interest at such times. The

VI

If the pay roll tax does not produce an increase in incomes and prices, the demand curve for labor will shift to the left. At the wage rates prevailing before imposition of the pay roll tax, the quantity of labor employed will be reduced. Unemployment will retard the increase in wage rates as technological progress raises the marginal worth of labor. It might be supposed that the retarding of the increase in wage rates would continue until the unemployed displaced by the pay roll tax had all been absorbed. This presupposes, however, that the benefits paid have no effect upon the labor supply curve. Pensions, even though low, will undoubtedly produce a few retirements. Likewise, unemployment benefits will slightly raise the reservation prices of unemployed workers and make them less willing to accept the first job that comes along.[33] More important than either unemployment compensation or old age pensions upon the reservation prices of labor will be relief payments. The social security program by producing unemployment may cause an expansion of relief payments. To the extent that social security benefits and relief move the supply curve of labor to the left, they counteract the tendency of the pay roll tax to keep down the price of labor.

Even though the social security program (including relief) raises the reservation prices of labor, it is not likely to affect materially the number of workers available at prevailing wage rates to existing nonagricultural enterprises. In existing concerns the price of labor seems to be set during periods of contraction by the employed rather than the unemployed—by the resistance of the employed to cuts rather than the willingness of the unemployed to accept less than prevailing rates.[34] If the reservation prices created by social security affect the volume of employment, it will be through their effect upon wages in new concerns and, therefore, upon the number of business births. Even in periods of contraction the number of business births is close to 200,000 a year for new going concerns. The wage rates paid by new concerns in periods of great unemployment appear to be substantially below prevailing rates. Consequently, the reservation prices established by social security may substantially affect wages in new concerns

increase in consumer incomes made possible by the liquidation of the unemployment funds will also improve the general business situation. Consequently, during periods of depression, property owners will gain but not at the expense of other groups in the community.

[33] May not the payment of benefits reduce the reservation prices of labor? The workers in covered industries receive protection which workers in uncovered employments do not enjoy. Will not workers, therefore, be attracted to the covered industries? As between the covered and the uncovered industries, this is probably true at least to some extent. The fact remains, however, that reservation prices are to considerable extent determined by the amount of resources upon which unemployed workers may draw. Pensions and the unemployment compensation may reduce slightly the reservation prices of workers with respect to employment in the covered industries, but all payments in compensation of unemployment tend to raise the reservation prices of workers as a whole.

[34] In periods of expansion the effect of the unemployed upon wages in old concerns is probably greater than in periods of contraction.

and thereby reduce the business birth rate.[35] If so, social security legislation (and wage-hour legislation as well) may affect the resiliency of our economy—its capacity to spring back after a shrinkage in employment. This, however, is still an unexplored field. Little is known about the determinants of the birth rate of new enterprises. Until exploration has occurred, we remain very much in the field of conjecture and we must not be surprised if the unintended consequences of public policies are more important than the intended ones.

VII

Thus far we have discussed the incidence of a pay roll tax on the assumption that the price of labor is set by supply and demand. To an increasing extent, however, the price of labor is an administered one, fixed by bargaining between trade unions and employers. To explain the effect of social security in such a world, one must consider how it will affect the bargaining power of unions and employers. Bargaining power may be defined as the cost to A of imposing a loss upon B. Part of the cost to union members of raising wages beyond a given rate is unemployment. To the extent that unemployment is compensated by insurance or relief, unions will be willing to endure larger amounts of it in order to raise the wages of their members. Trade union wage policy has been influenced by the fear of nonunion competition. To the extent that social security and relief diminish the birth rate of new concerns they will limit the influence of nonunion competition upon union wage policy. Hence we may conclude that in a world of administered prices of labor, social security will tend both to raise the wages of the employed and to increase the number of the unemployed.

Will the increase in the bargaining power of labor be harmful to enterprise? Possibly, but not necessarily. The greater pressure on employers to raise the price of labor will (1) accelerate technological discovery, but (2) reduce the proportion of new ideas which are considered worth exploiting. It is sometimes said that wage increases will not increase the use of laborsaving inventions because (unless labor costs are less important in the capital goods industries than in other industries) the price of capital goods will be raised in the same proportion as wages.[36] But the expectation of wage increases will produce laborsaving inventions as a method of embodying today's labor costs into tomorrow's production costs. Likewise, the expectation that higher wages will raise the prices of capital goods will stimulate the making of capital-saving inventions. The proportion of laborsaving and

[35] However, the effect of the social security program upon the wages paid by new enterprises will be substantially less in most industries than the minima established under the Wage-Hour Act.

[36] *See* H. G. Hayes, "The Rate of Wages and the Use of Machinery," *American Economic Review*, XIII, 461-465, and P. H. Douglas, "The Effect of Wage Increases Upon Employment," *Proceedings of the American Economic Association*, 1939, pp. 138-157.

capital-saving inventions may not be changed, but the rise in the bargaining power of unions will increase the marginal efficiency of expenditures on discovery and thus will raise proportion of the community's resources devoted to discovery.

Although the rate of discovery will be raised, it is not certain that the volume of investment will expand. The volume of investment depends upon the prospects for profits over the long period. If employers expect wages to be promptly bargained upward whenever profits appear, their estimates of the marginal return on capital will be lowered and the proportion of the new discoveries which seem worth developing will be reduced. It is impossible to determine whether the net effect of a faster rate of discovery and a more selective exploitation of discoveries will be a larger or smaller volume of investment.

This analysis must be qualified by the observation that collective bargaining is still in a very rudimentary stage and that the policies of unions are likely to be influenced more by experience with collective bargaining than by the effect of the social security program upon their bargaining power. For example, experience in selling labor is likely to alter the tendency of unions to underestimate the elasticity of the demand for labor and to overlook the fact that the elasticity over a period of several years is much greater than the elasticity at a given moment. Nor must the present crude and simple wage structures necessarily be regarded as final in a rapidly changing world. Wage systems may develop which greatly increase the interest of the unions in the volume of employment.

VIII

The following general conclusions stand out from this analysis:

1. About one fifth of the labor supply is mobile and works for more than one employer in the course of the year.

2. Despite the fact that the amount of movement in the labor market is considerably less than in prewar times, it is probably excessive. It is excessive in the main because it is forced and represents organization of work to an uneconomical extent upon a casual basis, but partly because much of it is uninformed.

3. Little is known about the 10,000,000 or more persons who supply the demand for temporary workers. Many of them undoubtedly have a principal occupation which dovetails with temporary employment outside of it. Some of them are seeking only part-time employment either for a few months of the year or part-time throughout the year. Some are young workers who have not succeeded in obtaining the status of regular employees. Until more complete and definite information concerning the suppliers of temporary labor becomes available, we shall be in the dark in deciding many important questions of policy.

4. The excessive amount of intermittent employment creates a strong prima facie case in favor of experience rating. This does not mean that specific experience rating provisions in existing legislation are well conceived.

5. The old age provisions of the Social Security Act tend to break down barriers to movement—a desirable result. To some extent their effect will be counteracted by the old age assistance plans which are based upon residence requirements that should be altered.

6. Definite information is lacking on how many and what kinds of people fail to qualify for unemployment benefits because their earnings or employment is insufficient.

7. Unemployment insurance is not likely to affect the mobility of most of the covered workers because the great majority who qualify for benefits have attachments to particular employers which discourage them from moving and because the duration of benefit payments is short. To some extent, however, unemployment benefits may discourage movement by encouraging workers to remain on the chance that more or less indefinite reemployment opportunities may become realities. This is likely to be a good result in a majority of cases.

8. The present trend is to make eligibility requirements for unemployment compensation more strict. Perhaps the trend should be reversed as the present laws seem to give protection to the workers least in need of it and not to reach those workers most in need of protection. The problem of more liberal eligibility requirements is complicated by the fact that many short-term or intermittent workers are not seeking full-time employment. Until more is known concerning the persons who fail because of insufficient earnings or employment to qualify for unemployment compensation, we are not in a position to judge the desirability of changes in eligibility requirements.

9. Relief is likely to affect the mobility of many thousands of persons of low employability. However, the effect of relief upon mobility must not be exaggerated. The rise in hiring standards will probably cause industry to draw on the huge labor reserves among the nonemployed and in agriculture before engaging the persons of low employability on relief. Hence, an expansion of the proportion of the population at work in nonagricultural pursuits to substantially higher figures than prevailed in the twenties will probably not reduce unemployment (over and above seasonal unemployment) to below 2,500,000.

10. Social security taxes encroached upon profits to a moderate extent in 1937 and limited the expansion of business. The excess of collections over disbursements was less in 1938, but the proportionate reduction in profits was greater. Although the social security taxes were not an influence of first importance in intensifying the depression, the encroachment upon

profits must have restricted commitments. In both 1937 and 1938, the social security taxes substantially affected the profits of the railroads.

11. It is unlikely that the incidence of the pay roll tax in the long run will be broadly diffused throughout the economy by higher costs which will induce larger income flows and thereby higher prices. For a period of fifteen years interest rates may be moderately affected by the program. After that time its effect upon interest rates will be negligible. In the area of competitive wage determination, the pay roll tax will move the demand curve for labor to the left. To a small extent the payment of benefits will also move the supply curve of labor to the left. This will affect new enterprises far more than existing ones. It remains to be seen whether or not the program will materially affect the birth rate of new enterprises and the resiliency of our economy.

12. The social security program will increase the bargaining power of trade unions and tend to reduce the interest of unions in the effect of their wage policies upon the volume of employment. It will tend to increase the rate of discovery but to reduce the proportion of discoveries that are worth exploiting. Its effect upon the volume of investment, therefore, is uncertain. Trade union wage policies, however, are likely to be less affected by social security than by longer experience of unions with collective bargaining. But since the social security program tends to diminish the concern of trade unions with the volume of employment, it creates the need for developing wage structures and forms of wage payment which increase the interest of unions in employment.

ECONOMIC PROBLEMS IN THE PROVISION OF SECURITY AGAINST LIFE HAZARDS OF WORKERS

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Ever since men have worked for wages, attempts have been made to develop some means of obtaining protection against dependency when wages cease. Workingmen's funds, friendly societies, trade union benefit plans, mutual benefit associations, and individual and group insurance are but a few of the devices invented by man to lessen his insecurity in the face of the more serious hazards of life. Social insurance, now a half-century old, is but one of many social institutions which have evolved out of long experience. Adapted to an industrial society, it has, however, grown with remarkable rapidity in recent years.

A complete analysis of the economic problems of providing security against the life hazards of workers would necessarily include an extensive discussion of various types of relief. At a time when our country is putting into high gear the largest single social insurance scheme in the world, it seems more appropriate, however, to weigh the economic problems of the insurance method of attacking insecurity. On January 1, a system of old age insurance, which has been gaining momentum over five and a half years, comes into full operation.

It may be well at the outset to distinguish between that type of social insurance covering the life risks of workers and that covering employment or other current risks. In the first category fall insurances against dependent old age, premature death, and permanent disability, with the associated risk of loss of support for dependents. In the latter category are the insurances against loss of employment and temporary illness or disability. An important distinction, affecting both legislative policy and administration, is that the former type of risks involve the permanent elimination of the insured wage earner from the labor market, while the latter involve only temporary elimination. In both unemployment and health insurance, an important element in the program is the provision of adequate means of aiding the worker to return to gainful employment.

Under insurances against life risks, the payment of benefits is in most cases related to changes in the physical life of the insured such as the attainment of a predetermined age or the occurrence of death. Permanent disability is less easy to determine but remains primarily a physical rather than an economic condition. But once approved, benefits under these insurances usually continue for relatively long periods of time. Costs are more affected by secular trends in longevity, mortality, and the progress of medical science than by cyclical variations in business or by technological

change. Obligations and expectancies accrue over relatively long periods of time and extend far into the future. For these reasons, it is peculiarly important in this type of insurance to plan finances many years ahead.

On account of the reciprocal nature of the risks of premature death on the one hand and dependent old age on the other, it has proved advantageous to cover these two risks in a single insurance system. Insurance against permanent disability, including many of the same elements of risk, seems a logical addition to the system although introducing many new administrative problems. Even with this addition, a combined program of old age, survivors', and invalidity insurance seems relatively manageable under a single administration. A predominance of routine operations and the need for the soundest possible financial and actuarial base suggest the advantages of a single, national system of large dimensions. With such a large, national system, economic problems are bound to arise.

An economic question of fundamental importance in the planning of a system of old age and survivors' insurance is which of three major alternatives will be chosen as the basic financial policy to be followed. This question has been before the American people during the past five years, and Congress made a choice some months ago. Without doubt, the question will be reopened in years to come. It is vital, therefore, that economists continue to study the problem.

One alternative in financial policy is that the government accumulate, through higher taxes in the earlier stages of the plan, a reserve against the time when disbursements reach large dimensions. Due to the increasing number of persons eligible for benefits and the rising average benefit, old age insurance payments are bound to increase, even though the provisions of the system are in no way liberalized. The arguments for such a financial policy include the assumption that thereby greater security for future beneficiaries is afforded, better public accounting is established, and the true cost of the system is kept more vividly before the public and Congress. The reserve, in a sense, becomes an endowment fund which affords interest to supplement the income from current contributions when these become insufficient.

Those who object to this alternative fear the untoward effects of this net inflow on the fiscal policy of government and on the general economy. In the dimensions required, this accumulation may cause serious disturbances in the normal flow in private channels of income used for consumption and a reciprocal disturbance in the flow of funds for investment. Likewise there is no assurance that the government's use of the net income of the old age insurance system will be wise or that the accumulation will in any way enhance the government's capacity to provide the additional appropriations necessary as the system matures. In some ways, it is the irony of economic misunderstanding that the financial policy of the 1935 Act was censured

by some on account of a condition which for the time lessened its adverse effects on the economic system. Under conditions of deficit financing the net accumulations under the Act have had much less effect than if the government's budget had been balanced. In a time of surplus financing under a conservative administration, the net accumulations under the large reserve policy might have been defended by many of these same critics despite the serious economic consequences involved.

A second alternative in financial policy in an old age insurance system is that supported by the "spend-lend" group in Washington today and by some industrial executives. Under this alternative, the old age security program becomes an active instrument of fiscal policy in stimulating business recovery and avoiding the curse of "oversaving." Under this policy, reserves are avoided or cut to the bone. Carried to its logical conclusion, the policy encompasses the philosophy of the Townsend and general welfare groups, that the "senior citizens" of the country should serve as the pipelines for pouring more governmental funds into the stream of private consumption.

Under this second alternative, the essential nature of a social insurance system is likely to be ignored. The great advantages of long-run equities between the insured and the insurer are submerged under a welter of temporary fiscal expediencies. But the advantages of conserving reasonable equities in a social insurance system are not only financial in nature but include the preservation of the relationship between contribution and benefit that is essential to economic and political stability in a capitalistic democracy. The normal rise in old age security disbursements makes this field of governmental finance a peculiarly dangerous one for experimentation. It is exceedingly difficult to reduce the level of individual payments to older persons after these annuities have become incorporated in the standard of living of persons of fixed habits. The policy of making old age security payments an active instrument of fiscal policy is far more dangerous than its counterpart, the large reserve policy. It seems to re-echo the words, "after us the deluge!"

The third alternative in financing an old age insurance program appears to avoid the dangers of either extreme in policy. It is the adjustment of the financing of the program to its current internal requirements, affecting the current fiscal policy of government to the least extent compatible with adequate and sustained protection to the insured population. It is assumed that the scheme is neither an autonomous, self-contained insurance system operated by the government nor a relief program. It places government neither in the role of a great saver or a great spender. Under this policy both net incomes and net disbursements at various stages of the program are confined to those justified by sound planning of a social insurance system in which the volume of payments is related to continuing equities

and not to current fiscal expediency. Government appropriations to the system under this policy, while justified on grounds of social insurance policy, would be so planned and timed as to lessen the disturbance to the general fiscal program of government.

Old age insurance payments are, it is true, essentially a diversion of income flows in a single plane of time between contributors and beneficiaries. While mathematically it might be possible to work out a neat balance between income and disbursements and to avoid the need of any reserve, the plain facts of administration require something of a contingency reserve to permit ready adjustment to short-term economic change. Since contribution rates can be changed but gradually and benefits once determined become fixed, it seems desirable to have some shock absorber in the financial mechanism to carry the system over the humps and valleys of cyclical fluctuations as well as the minor discrepancies between estimates and realized experience. It is true that such short-run disparities could be met by loans to the system by the government or by emergency appropriations from time to time. To promote public confidence and to avoid reliance on hasty congressional action, it seems best, however, to depend on a modest contingency fund to absorb these discrepancies. In addition to this function, the fund serves as an obvious indicator to Congress and the public of the degree to which the financial planning of the system is effective.

No method of financing a continuing social service is foolproof or automatic. The best method is that which recognizes both the economic and the political elements of a capitalistic democracy and avoids the assumption of abnormal self-restraint on the one hand or shortsighted irresponsibility on the other.

In the acceptance of the third alternative in financing its program of old age and survivors' insurance, the United States has adopted, in effect, the principle that the government should participate in the financing of the system by means of appropriations supplementing contributions. It is possible, in theory, that the future costs of the system be met from current contributions alone. More realistically, such dependence seems politically impossible and economically unsound. The early recognition of the full implications of the financial policy now in effect would do much to safeguard the program from undue liberalization.

In addition to future financial necessity, economic and social implications of the system militate in favor of government appropriations to supplement contributions. While the present level of pay roll taxes should be increased, there are definite limits to the use of this means of obtaining revenue. Such taxes, when raised unduly, are bound to affect the demand for labor adversely and to encourage the introduction of laborsaving machinery. Carried to excess, they may retard the development of new enterprise, particularly in industries making a larger proportionate use of labor in production. Severe repercussions may occur on account of the differing effects

of high pay roll taxes on industries of varying size, location, product, and production methods.

On the other hand, the government is justified in its use of general tax funds in subsidizing the old age insurance system since it has adopted the policy of providing large "unearned" benefits in the early years of the system. It is questionable policy to assume that later contributors should absorb the cost of these unearned benefits at the expense of rates of contributions in excess of those warranted by the benefits offered. Throughout the life of the system, the government will be relieved of assistance expenditures of considerable dimensions. Since these expenditures would have been financed from general taxes, it seems that a part of the saving, at least, might appropriately be diverted to the insurance system. By this means, the more constructive method of affording old age security is enhanced in effectiveness and the temptations of panaceas reduced.

Interlocked with these economic considerations is the need for government subsidies in a system which involves a pronounced secular rise in costs. The great shift in the age balance of our population is not the result of the action of any individual or administration but of forces within society itself. Only that society, through continuing governmental policy, can deal effectively with the economic necessities arising out of the shift. Through proper timing, financial participation by government in the old age insurance system makes possible an adjustment to dynamic change which otherwise might be fraught with grave difficulties.

In determining the proper financial policy for an old age insurance system, a question has been raised by some as to the possible impact of the program on the rate of capital accumulation in the country. Without entering upon the controversy which surrounds the general problem of savings and investment, it is relevant to estimate the degree to which this form of social insurance may prove a complicating factor.

There seems to be no ground for assuming that employee contributions under old age insurance will materially reduce the rate of savings of the wage-earner group as a whole. In the case of a large number of workers of lower income, there is little or no saving to be reduced. For a middle income group some reduction may occur. But experience under private plans for wage-earner security indicates that a very real possibility exists that savings may be stimulated by the provision of basic, compulsory protection. In the absence of any planned provision for old age or surviving dependents, many wage earners able to save appear to consider adequate protection beyond their reach. With the provision of a certain but limited scheme of benefits, incentive is aroused to build upon this foundation of basic protection. Thrift is a habit which like all habits grows upon the satisfactions it affords. The sense of security in a status of life for oneself and one's family is a satisfaction of no mean significance in determining economic motivation. The number of company pension plans supplementing the pro-

tection afforded by the old age insurance program is growing steadily and, despite the requirement of employee contributions, such plans seem to be meeting with a favorable reception on the part of the wage earners covered.

Employer contributions to the old age insurance system are probably shifted in such large measure that the impact on the accumulation of surpluses by corporations will in all probability be slight. However, should pay roll taxes rise sufficiently, the incentive to introduce laborsaving machinery may involve a considerable amount of plowing back of profits into this type of equipment. In that case, saving and investment will go hand in hand, or new channels of investment may be created.

The effect of the net income accruing to the old age insurance fund upon the general rate of capital accumulation will, of course, depend upon the use made of such income. In a time of deficit financing, the proportion going into noncapital expenditures will probably be large despite the expansion of public works. The repurchase of debt in a time of surplus financing would transfer income from wage earners more likely to spend to bondholders more likely to save. An important argument for avoiding the accumulation of a fund beyond that needed as a shock absorber within the system is the advantage of preventing such interference with normal economic processes.

Perhaps more important than the impact of a national system of old age insurance system upon the general rate of capital accumulation will be its impact on the mobility and incentives of our people. The character and force of these impacts are, however, still largely matters of speculation. Only after benefits have been paid for a considerable time and become a part of the thinking and planning of our people, will the full effects of the system be apparent. However, bits of evidence are already accumulating to lend some weight to tentative premises.

It is probable that old age benefits under the revised 1939 scale will be sufficient to encourage some movement of superannuated beneficiaries from high- to low-cost areas of residence. Since benefits under the federal insurance scheme are payable anywhere in the world, it will be a sensible arrangement for an aged individual or couple to move from city to town or country, from North to South, or from America to the country of birth. The present movement from northern states to Florida and from the Midwest to California may be accentuated as federal benefits, payable for life, supplement savings. Such a movement would certainly be compatible with sound economic distribution of our population. Just as the cities draw upon the country for youthful population at a time in life when rising productivity permits the absorption of the higher costs of urban life, so the country will attract back to itself the older persons who, with impaired productivity, are enabled through insurance to draw upon the general stream of national income.

In the case of wage earners in their productive years of life, the insur-

ance system may likewise encourage mobility. To the extent that younger workers have been tied to a locality by the need to support aged parents, this tie will be lessened. Old age insurance benefits of relatively adequate amount, assured certainty, and entire respectability, may prove much more effective in encouraging the break than small savings or old age assistance.

Likewise it seems probable that the relative attractiveness of employments covered by old age and other social insurances will be sufficient as time passes to encourage mobility from uncovered employments. While the latter employments occur in all types of localities, the exclusion of agricultural employment from coverage may add materially to turnover of labor in rural areas. It may well be that agricultural employers may some day press for the inclusion of their people under the Social Security Act to lessen this handicap in retaining an adequate labor supply.

In industrial employments, the revised plan of old age and survivors' insurance will add to the arractiveness of those industries and firms which afford sufficiently stable earnings to assure continuing eligibility for benefits and an adequate average wage as a basis of benefit determination. At the same time, private pension and insurance schemes which require long periods of service for eligibility will lose some of their hold. To this extent employers will be competing more on the basis of the future possibilities of earnings and employment afforded their employees and less on the basis of expectancies growing out of past service.

Industry, generally, will have more to offer younger employees as the insurance plan becomes effective in stimulating the retirement of superannuated personnel. Just as a limited number of progressive employers have adopted private pension schemes to accelerate the rise of more effective personnel through the ranks, so the government plan will increase the "internal" mobility of more competent workers. In this way, the insurance plan should, indirectly, enhance the incentive of a considerable part of the wage-earning group.

Another source of incentive in the old age insurance system is the influence which it may have on the stimulation of a desire for security on the part of our people. Not only is social insurance a means of protection but a significant educational force. Through continuing participation in the plan as contributors and through the experience of seeing benefits paid to relatives and friends, an increasing recognition of the costs and values of security seems likely to develop. Along with many other forces, the insurance plan may encourage the desire for more security among workers who previously by choice or compulsion were forced to accept a month-to-month or year-to-year existence. This added security may be attained through increased productivity and earnings or through saving of a larger share of income. In either case, both incentive and security will be enhanced to the advantage of workers, employers, and community alike.

ECONOMIC PROBLEMS IN THE PROVISION OF SECURITY AGAINST EMPLOYMENT HAZARDS

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Reduced to their barest essentials the economic problems in the provision of security against employment hazards are of two types: those which arise from the nature of the benefits or assistance provided and the conditions laid down for their receipt, on the one hand, and those which arise from the methods of providing the necessary funds, on the other. Hitherto industrial societies have characteristically met these problems by instituting a constellation of autonomous programs, each having its own objective and each having a unique type of benefit and conditions of eligibility and its own, presumably appropriate, methods of financing. Thus the insurance type of unemployment benefit is characteristically financed by earmarked pay roll taxes and usually (although not normally in this country) by wage taxes. Direct unemployment relief given on a means test basis has generally been associated with a method of financing that relies upon general tax sources (which may be 100 per cent local as in this country or 100 per cent central as in Great Britain since 1934). In this country work relief programs have tended to be associated with federal financing.

In each case the methods of financing and the benefit structure have been justified in terms of the major objectives of the program in question. But when we regard these systems as parts of an articulated whole it is evident that this approach to the problem means that either the relative importance of a particular form of benefit in the constellation of programs depends on the funds available from its specific tax sources, or that the extent to which particular methods of financing are employed will automatically depend on decisions as to the desirability of one type of assistance as compared to another. Experience suggests that this policy does not always lead to the most economically desirable results.

In Great Britain the motivating force for adoption of unemployment insurance was undoubtedly a concern over the unsuitability of the poor law type of assistance for the normally employable worker. The financial methods were a means of securing the adoption of a new type of assistance which admittedly involved certain economic risks. During the twenties the increasing volume of unemployment forced extensions in the insurance system which fundamentally modified its character. From a limited system carrying a relatively small governmental subsidy, it became by 1931 a system providing for 87 per cent of the unemployed and financed to the extent of almost 50 per cent by central government subsidies. Thus extended it became impossible to argue that this type of benefit was being paid only to workers for whom flat rates of benefit, unrelated to wages and paid re-

gardless of need and without any requirement to undertake training or transfer, were appropriate. The important point to note is that this change in the insurance system took place precisely because the original internally consistent and necessarily limited insurance system failed, on the one hand, to provide for as wide a use of the insurance system as was consistent with popular views regarding the desirability of this type of benefit as compared to others, while, on the other hand, the limitation of central government responsibility to aid through a relatively insignificant insurance system left the localities with an unemployment relief burden which their fiscal resources could not carry.

The incorrectness of the assumption that the relative part to be played in the total program by a particular type of assistance could satisfactorily be determined by the yield of specific taxes is still apparent, despite the reorganization of the British insurance system after 1934. In 1936 the Statutory Committee, which is responsible for seeing that the funds are adequate but no more than adequate to meet benefit liabilities, decided to refrain from using a surplus to increase the duration of insurance benefits, much as its members would have liked to see this type of benefit more widely used. They refrained, because an extension of insurance involved a reduction in the numbers receiving assistance and since the latter was financed 100 per cent by general taxes, whereas insurance was financed only to the extent of one third from this source, they were unwilling to take a step which in fact implied increasing the relative share of the total costs of aid to the unemployed which would be carried by wage and pay roll taxpayers.

In this country we have also instituted a system formally analogous to unemployment insurance. But here the impetus seems to have come from the opposite direction. Emphasis has been placed upon the system as a method of financing rather than as a system of benefit payments. Unemployment compensation has been promoted either as a technique for utilizing incentive taxes or as a device for minimizing the painful process of tax collection by accumulating funds in periods of prosperity for disbursement during depression. The benefit system is a by-product of this mechanism—to be determined by reference to the size of the available funds.

I believe that such a system is essentially unstable. Already there are signs that such support as was given by business to the variable pay roll tax arose out of a recognition of its potentialities as a device for securing tax reductions rather than as stimulus to stabilization of employment. And the very fact that benefits were so sharply restricted in the interests of a solvent fund is now being used as an argument in favor of decumulating reserves. For it can now plausibly be argued that benefits with an average duration of ten or eleven weeks and paying at most 50 per cent of wages could not have been intended to provide against cyclical unemployment and the case

for accumulating reserves against bad times is to some extent weakened. If this pressure continues, together with the theory that benefits are to be adjusted to what can be financed from these ever diminishing pay roll taxes, the type of benefit which we call unemployment compensation may come to play a minute role in the total unemployment program. Certainly its role will differ from that which would be assigned to it if the problem were approached by asking what would be the appropriate place of this type of assistance as compared with available alternatives.

I have spoken so far only of unemployment insurance, but one could equally well ask whether the prevalence of work relief in this country is due to a reasoned preference for this type of assistance as compared with others, or whether it is due to the fact that it is the only route by which federal financial assistance can be secured for unemployment relief.

In the financial realm the consequences of attacking the problem solely in terms of the inner requirements of independent programs are equally unfortunate. In Great Britain today workers and employers are obligated, until 1971, to pay taxes to liquidate a debt incurred by the insurance system in 1921-31 when it was, in fact, carrying the major unemployment load. It is difficult to find any economic or social justification for this temporal distribution of costs. The only explanation can be the desire to implement the theory that the benefit system prevailing in 1921-31 was an insurance system which ultimately, i.e., by 1971, could be called solvent.

Again, Germany, Great Britain, and this country have tried to solve the problem of allocating financial responsibility as between governmental units by the principle of exclusive financial responsibility. Assistance given subject to passage of a means test and usually involving direct relief in kind or in cash, has been held to be a financial responsibility of localities. But considerations relating to the nature of the assistance given have served to limit the relative importance of the programs held to be appropriately, and often exclusively, financed by the central government (e.g., insurance or emergency work programs). The result has been to throw upon the fiscally limited local authorities an increasingly large residual, which has distorted local finances and frequently led to the curtailing of essential, locally provided social services.

If we abandon this attempt to create a series of autonomous unemployment measures in which particular types of benefit or assistance are associated each with its own particular methods of financing, it becomes possible to discuss the basic economic problems more intelligently. We can then inquire, firstly, what types of provision would seem to be appropriate for different types of unemployed persons and, secondly, what would seem to be the economically and socially desirable methods of financing a total program of a given magnitude and probable temporal distribution.

But as soon as the problems are posed in these terms we realize how

inadequate is the data on which we have to base policy, and for this I cannot but feel that we as economists have been largely to blame. For we have tended to assume that this field is one that could safely be left to administrators and social workers, and have been relatively indifferent to the economic implications of the specific programs now in operation.

A major decision in public policy concerns the type of assistance to be provided. The economic impact of the different measures has two aspects: the volume and timing of the expenditures resulting from adoption of given programs and the effect of each upon mobility and enterprise. It is evident that a policy of supporting unemployed workers by the offer of employment at standard rates of pay, hours, and working conditions will involve a larger volume of government spending than one which provides the bare essentials of living only to those of the unemployed who are destitute. Determination of the relative parts to be played by each of these programs by reference to economic criteria in this sense calls for knowledge of the kind of economy in which these measures are to operate. If for example there was a consensus among economists that, in Professor Hansen's words, "the problem of our generation is, above all, the problem of inadequate private investment outlets," a work program on a non-relief basis might perform a desirable economic function as a method of providing a volume of investment adequate to secure full employment. But the extent of such a program and the criteria for determining when it should taper off would then be based on considerations relevant to such a broad function and might differ markedly from a works program conceived of solely as a measure for providing bare maintenance to needy unemployed.

On the other hand, if it could be shown that the problem was not one of a secular decline in investment opportunities but of cyclical maladjustments which might be remedied by a rapid and temporary expansion of government spending, the choice between a large public works program and more generous cash payments to the unemployed would be made by reference to different criteria, among which the speed at which payments could be effected would be a major item.

Until economists can reach more unanimity on the nature and causes of contemporary unemployment, it is, I suggest, unfair to criticize our present combined public works and work relief policies for the fact that they appear to operate now on one assumption and now on another.

I will admit that I am asking much of economists and my major complaint is not so much that they speak with so little unanimity on this subject, as that they have almost entirely neglected to do any positive work on the other side of the problems; namely, the effect of different measures on enterprise, mobility, and the flexibility of the economic order. By and large, they have concerned themselves with generalizations: they discuss whether the guarantee of a minimum income is likely in general and in the long

run to increase rigidities and to weaken initiative. Leaving aside the question of the meaning of rigidity, which in itself calls for more careful definition, I would be inclined to hold that we do not need Rueffian or less objectionable statistical or analytical demonstrations to prove that the introduction of a minimum guarantee into an individualistic society will make workers less willing to accept any type of employment at any wages, and in that sense will reduce flexibility. My quarrel with the economists is that they are inclined to stop at that point. They do not proceed to ask whether we are in a position to say that in a society exhibiting other rigidities, the introduction of a similar element into the labor market is necessarily economically and socially unwise. Is there any validity in the theory of the downward spiral of which so much was heard in 1933? Are there some segments of the labor market where increased rigidity would be less harmful than in others? But even if we could assert with finality that new rigid elements have been in principle introduced into our economic order, it would seem to be more realistic on the part of economists to accept as given data the fact that some minimum guarantees are likely to be a feature of contemporary society and to commence and not finish their analysis at that point. Such an approach would involve a twofold line of investigation.

In the first place it would involve much closer attention to the types of benefits provided by the different programs and to an even more neglected field, the conditions of eligibility for each. The programs are far from uniform. Moreover, one which might adversely affect enterprise and mobility if widely extended might have positively advantageous results if confined to a selected group. Thus even an apparently standardized institution like unemployment insurance exhibits variations which affect mobility and enterprise in differing ways. Benefits roughly equivalent to the maintenance level and carrying dependents' benefits may have one type of effect; those equivalent to 50 per cent of a man's full-time earnings will have another. What are we to say about the effect on mobility and enterprise of the type of weekly benefit which is becoming increasingly common in this country and which is calculated as a fraction of a man's total quarterly or annual earnings? Can we indeed say anything significant on these points without more analysis of the actual payments resulting from these formulae and their specific relation to the previous incomes and employment status of the recipients? Can we say, if our present 50 per cent formulae result in average payments so low as to call for a substantial amount of supplementation from public assistance, whether the economically sound adjustment would be by increasing the percentage or by providing dependents allowances, on the one hand, or by changed eligibility requirements which would limit this type of benefit to persons for whom a 50 per cent formula would mean a significant sum, on the other? There is a general

tendency to assume that work relief is "less degrading" and less destructive of economic incentive than direct relief. But we cannot say whether this difference lies in the fact that a worker is required to make some return for his assistance or that he receives a larger money sum than he would get on relief. Do those who criticize the program know whether its alleged weaknesses lie in the methods of remuneration adopted, in the types of employment offered, in the principles by which the number of days worked are determined, or finally in the eligibility criteria by reference to which recipients of this type of assistance are selected?

Economists have been, as I have already said, peculiarly neglectful of the economic implications of the conditions governing eligibility for the different types of assistance. This is the more strange since the major purpose of these has been to limit the economic risk involved in making payments of various kinds by carefully defining the groups who may participate in each. Yet because of a lack of data as to the nature of the labor market the framers of these conditions have been compelled to work in the dark. It is generally assumed, for example, that the payment of insurance benefits which require no test of need should be confined if possible to persons who are normally attached to the labor market. Yet what does that phrase mean? To judge from current legislation it may mean a worker who has worked not less than a given number of weeks in the preceding one year, or two years; it may mean one who has earned a given sum of money over some period such as a year or a quarter. In England it might mean a person who had worked at least one day in thirty separate weeks in the two years preceding his benefit claim. Clearly the economic implications of these criteria are very different because of the differing patterns of employment of individuals.

The worker who for example has earned a given minimum sum in a preceding specified period may be one who normally intends to work full time but has been unable to secure full employment, or he may be one who has worked and intended to work only one or two days a week. Minimum earnings as a criterion of eligibility admits the highly paid seasonal worker to full benefit rights, and may yet exclude a more or less regularly employed worker whose full-time earnings are very low. I can put the matter another way by saying that a policy of compensating workers for weeks and especially days or half-days of nonemployment has different economic effects according to whether the worker is one who normally attempts to secure six days work for fifty-two weeks and depends upon what he earns, or one who works in a seasonal trade where slack periods in part of the year may or may not be compensated by high wage rates when in employment, or one who regularly works and intends to work only for a brief season in the year or for one or two days a week and is therefore presumably not wholly dependent on his annual earnings, or finally one whose employment

either voluntarily or involuntarily is casual or irregular and who is at all times partly dependent on public or private organized relief. To apply uniform policies which assume that a day of nonworking has the same significance for all these types of cases is bound to create anomalies and economic difficulties. Yet at the present time legislators cannot frame their eligibility rules in any certainty of the order of magnitude of the groups included or excluded, or of the resulting financial and economic consequences of their actions, because they possess but limited knowledge of the anatomy of the labor market.

There is yet another aspect of the conditions attached to the receipt of assistance which calls for greater factual investigation. The requirement to undergo a test of need or means test is a very general eligibility condition, being absent only in the social insurances and in certain types of emergency public works. The history of unemployment measures in Great Britain, in Germany, and to a lesser extent in this country suggests that the general unpopularity of this condition has been a potent stimulus to the evolution of social insurance and other programs where it is not insisted upon or applied only in modified form. Framers of social policy need guidance as to the economic implications of enforcing this requirement.

It is obvious that one economic function of the means test is to ensure that public funds conceived to be limited should be used first of all for those whose need is greatest. Already, however, there are economists who challenge the concept of limited public funds. If they are correct in their views of the ameliorative economic values of public spending in depression periods, the case for the means test as a check on expenditures falls.

But the needs test is also defended as a method of implementing the individualistic basis of our society. It is often asserted that the spirit of independence and initiative would be eroded unless state policy implements the view that the individual is in principle responsible for his own welfare. In the realm of unemployment relief this policy has taken the form of a refusal to provide governmental assistance until it can be shown that the resources of the family are inadequate. Yet analysis of data collected by the Unemployment Assistance Board in Great Britain suggests that enterprise and initiative may be just as adversely affected by the operation of the generally applied household means test. Analysis of the resources possessed by households of applicants in two recent years showed that over 70 per cent of these resources were attributable to earnings, and of this total, 50 per cent in 1935 and 64 per cent in 1937 were earned by sons and daughters. Since another 26 per cent of reported resources took the form of income from other social insurances and was therefore not liable to assessment, the enforcement of family responsibility meant in fact that the major share of the burden of maintaining the unemployment assistance claimants was thrown upon those who would norm-

ally be expected to be founding their own families. When it is recalled that the unemployed thus supported are by definition the older age group and the long-period unemployed whose chances of reabsorption are least, the effect upon the initiative and enterprise of younger workers who see all additional earnings mortgaged to support a permanent burden cannot but be adverse. If we could secure and analyze similar data for this country on the incidence of the test of needs and the composition of family incomes we should be in a much better position to answer the question, what part should be played by a test of need in a comprehensive unemployment relief program—policy would be based on economic realities not on vague generalizations.

Acceptance of the fact that contemporary societies must provide some minimum guarantee if only to preserve some shreds of social and political stability might lead economists, in the second place, to explore the possibilities of offsetting the harmful effects on mobility and enterprise by compensatory governmental action. Whether we think in terms of governmental promotion of mobility in the form of training or assisted transference schemes, or of more positive coercive measures such as the denial of benefits or assistance to individuals who refuse to shift, it is clear that at the present time we as economists have little to offer in the way of guidance. If a training program is envisaged, can we suggest the types and degrees of skill which should be made available? We have recently heard much of bottlenecks, but at the moment they seem to belong in the attic with Dr. Clapham's famous empty economic boxes. Is it any wonder that in the absence of guidance from economists the British Ministry of Labour has limited the places available on its training program to the chances of immediate placement on conclusion of the course, a policy which results in a progressive reduction of training facilities as the depression continues?

Again if assisted transference is contemplated can we give much technical advice? Can we, except in the most general terms, indicate the areas from which workers should be transferred and to which they should go? Can we say anything significant about the relative economic desirability of attempting to entice industries into depressed areas or of moving workers away from them? The bitter experience of the British Special Areas Commissions suggests that little is known of the forces governing decisions of businessmen as to where to locate. I suggest that we know almost equally little about the extent of or the incentive to geographical and occupational mobility on the part of workers. How large a wage differential is required to offset the costs of moving given distances? Is mobility stimulated more by unemployment and low wages in the home area, or by prospects of higher wages and better general opportunities in the new area? Is it inhibited by family ties, or by anticipated housing difficulties, or are there other factors still less susceptible of measurement? Is mobility greater among high paid

than among low paid workers? If the fifty-one separate state compensation systems are found to impede mobility, have we as economists any suggestions to offer as to groupings in areas or regions within which free mobility is especially desirable?

I have deliberately devoted most of my time to discussing the first of the two types of economic problem to which unemployment measures give rise, partly because I believe that these are today most in danger of neglect, and partly because the two other speakers are giving particular attention to the financial problems. Even in the financial realm, of course, the data on which policy must be framed are far from adequate. We commit ourselves to a policy of state unemployment compensation systems with little information as to the incidence and duration of unemployment among the covered group in each area and therefore of the ability of a uniform 2.7 per cent tax to finance the benefits offered. We grapple with problems of the proper distribution of costs between federal, state, and local authorities with little data as to the basic fiscal, and particularly economic, capacities of local areas in relation to the burden they are expected to carry. We adopt the pay roll tax as a major source of income for one of our programs with little knowledge of its probable incidence and still less of its potentialities as an incentive tax.

But in the financial field, I believe that the problems which face us involve less the accumulation of new data than a more vigorous attempt to consider the financing of separate unemployment measures in relation to one another and to the general economic and fiscal background. This is not to imply that we should abandon any attempt to inquire whether the values of certain programs are not enhanced by the use of particular financial methods. It is undeniable that the linkage of specific taxes with specific benefits in the institution known as social insurance has enabled us to overcome resistance to the introduction of a new type of aid to the unemployed into a still highly individualistic society. But if we should decide that wage taxes are undesirable or have social consequences incompatible with our basic objective of security or that the incidence of pay roll taxes falls on the very groups whose insecurity we are trying to remove, the solution is not necessarily an abandonment of these taxes. Should we not explore the potentialities of compensatory action in other parts of the government's taxing and spending activities?

Can the case for accumulating reserves in an unemployment insurance system be discussed independently of the economic system of the country at the time the process of accumulation is initiated or of the timing of disbursement of these reserves? Can we expect the accumulation of reserves to serve the purpose of "pegging" or maintaining a stable benefit structure if the other unemployment programs are financed on a current cost basis and reflect every changing political whim? Is the accumulation of reserves

appropriate only for unemployment insurance or should the principle be applied to other unemployment measures? And if a unit of account longer than a year is desirable, why are reserves favored and borrowing disapproved of?

Some of you may object that I am attempting to lure economists into a dreary statistical and factual course, unworthy of their high calling. Yet I cannot see that exploration of the structure of the labor market is intrinsically less interesting than analysis of the capital market, or that the compilation of statistics of the movement of security prices, interest rates, or demand deposits is a sharper challenge to intellectual ingenuity than analysis of occupational or regional wage rates and earnings or the charting of specific portions of the labor supply curve. One explanation of the current preoccupations of economists may be the greater prevalence of theoretical concepts and dignified technical terminology in the capital field, but that can easily be remedied. Marschak already offers us coefficients of mobility, measures of attraction, and coefficients of spatial friction.

I believe, however, that a more important explanation is the accident of availability of data. But thanks to our new social security legislation, a considerable amount of data in the labor field are now becoming available. And data will become increasingly available if economists will turn their attention to this field and take the responsibility of suggesting the types of information which are required to provide the basic data essential for the determination of future policy. The work of Jewkes, Campion, Thomas, Marschak, and others in England has shown how much can be gleaned from the administrative records of the unemployment insurance system. In this country, the almost complete reliance upon quarterly reports and abandonment of information on weeks of work has deprived us of certain essential data, and economists have raised little or no protest against this outrage. The reporting requirements incidental to the payment of insurance benefits offer the possibility of securing significant data on labor mobility, as between places and occupations, and on the patterns of employment and unemployment, and the levels of earnings and wage rates. This information will not be secured unless economists bring pressure on administrators to frame their questions in appropriate terms and occasionally to ask for more than is immediately essential for administrative purposes.

ROUND TABLE ON ECONOMIC ISSUES IN SOCIAL SECURITY POLICY

J. Douglas Brown, *Chairman*

This session was organized as a panel discussion of the problems raised in the preceding session on the same topic. The members of the panel were: Arthur J. Altmeyer, Eveline M. Burns, Frank T. de Vyver, C. A. Kulp, Richard A. Lester, Sumner H. Slichter, George H. Trafton, and Edwin E. Witte. Discussion centered on the impacts of social security legislation upon enterprise and mobility of capital and labor. Among the specific questions considered were the effect of separate state systems of unemployment insurance, of an extended duration in benefits, and of benefits for partial unemployment on the mobility of labor; the effect of merit rating and governmentally stimulated stabilization of employment upon enterprise and enhanced employment; the general effect of pay roll taxes on enterprise and employment; and the impact of social insurance reserves on the general economy. During the first hour of the session discussion was carried on by the panel, but the succeeding hour members of the audience actively participated both in raising questions and in presenting additional comments and material. Initiated as an experiment in conference method, it is believed that the sustained interest shown by the audience throughout the session warrants further use of this method at future meetings of the Association. Since no prepared papers were read and since time did not permit the development of specific conclusions, it seems best to report on the session more as an educational process than as the source of new findings.

A list of questions was sent out to the participants well in advance of the meeting. Although time did not permit discussion of all of these questions, they are here presented as suggestive of the economic issues involved in social security policy:

1. Is our present social security program compatible with the degree of mobility and enterprise of capital and labor necessary to the satisfactory operation of our economic system?

   (a) Problems in unemployment insurance legislation:

   Do separate state systems impair mobility?

   Does merit rating impair enterprise in speculative expansion of employment and plant?

   Is governmentally stimulated stabilization of employment desirable or is intermittent operation of industry a necessary element of a flexible economy?

   Will extended durations in unemployment benefits lessen the mobility of labor?

   Do benefits for partial unemployment discourage the wholesome movement of workers out of depressed industries or areas?

   (b) Will the assessment of the full costs of old age and unemployment insurances upon employer and employee retard the development of new enterprise?

   Should part of the costs of such insurances be assessed on all taxpayers according to ability to pay in order to avoid any such retardation?

   (c) Will the provision of old age insurance protection enhance mobility and incentive of wage earners:

   In relieving younger workers of burdens and local ties due to dependent parents?

In eliminating older workers and encouraging employment and earlier promotions?

In encouraging efforts of wage earners to earn and save more as a means of enhancing the basic protection afforded by old age insurance?

In lessening the influence of company retirement programs on labor mobility?

2. Is the existing social security legislation likely to increase the security of some workers while decreasing that of others?

   Non-covered groups under old age insurance:

   - Self-employed?
   - Farm labor and domestic employees?

   Less competent workers employed intermittently?

   Employees affected adversely by stabilization resulting from merit rating?

3. Should social security legislation be broadened to give protection to the entire population and particularly to those groups who are the worst victims of insecurity?

   What is the place of social insurances compared to assistance programs?

   Should flat benefits be paid regardless of previous earnings?

   How can existing social insurances be adopted to coverage of groups now excluded?

4. Would the adjustment of the ratio of federal matching of state grants for old age assistance according to the economic capacity of the state interfere adversely with the optimum allocation of labor and enterprise in the country as a whole?

5. Do the "unearned" benefits under the present old age insurance program favor unduly wage earners in regions where lower average wages are paid?

6. Does the present large size of unemployment insurance reserves in certain states affect adversely business activity in those states?

   If so, should pay roll taxes in those states be lowered or should benefits be increased?

   Would the pooling of unemployment insurance reserves under a national insurance system permit a sounder reserve policy?

   Would such pooling favor enterprise in states with less stable industries at the expense of states with more stable industries?

7. What will be the effect of "forced savings" under the social insurance programs upon the rate of capital accumulation in this country?

8. Are social security programs likely to affect materially either the level of wages or the volume of employment in covered industries?

ROUND TABLE ON BANK DEPOSITS AND THE BUSINESS CYCLE

JAMES W. ANGELL, *Chairman*

The following papers were presented at this session: "The Significance of American Deposit Movements Since 1929," by Martin Krost; "Turnover and Idle Deposits," by Victor M. Longstreet; "Bank Deposits and the Stock Market in the Cycle," by Fritz Machlup; and "The Behavior of Bank Deposits Abroad," by Rifat Tirana. Donald S. Thompson, Norris Johnson, Walter R. Gardner, and Paul T. Ellsworth participated in the discussion of the papers. The papers by Professor Machlup and Mr. Tirana are published in full immediately following the round table summary. Mr. Thompson prepared a summary of his remarks.

The chairman opened the discussion by calling attention to the growing integration between the formerly separate fields of monetary theory, business cycle theory, and general economic theory; and to the shift of emphasis in monetary theory from the relation between money and prices to that between spending and income.

MARTIN KROST: First, in 1928-33 total deposits and currency fell by 25 per cent; but by 1939 the total was 7 billion dollars above the 1928 peak. These extraordinary fluctuations in reported deposits are due chiefly to real changes in deposits, but are also due in part, to an unknown but presumably substantial extent, to the suspension and reopening of banks before and after 1933. The depression-period preference for holding currency rather than deposits continued into the period of deposit expansion, and helps explain the slowness in the recovery of time deposits after 1933. The events of the period since 1928 are difficult to reconcile with any simple formulation of the relation between money and prices, but despite short-run divergences, a general similarity in direction and magnitude of movement is still visible between money supply and general economic activity. Second, the changes in bank deposits and currency can also be studied in terms of the offsetting changes in the other items of a consolidated balance sheet for banks, reserve banks, and the Treasury. This balance sheet shows that the most important factor in the decline of deposits in 1930-33 was a decrease of 19.7 billion dollars in loans, offset only in part by increased holdings of United States securities and by reductions in bank capital. In the expansion of 1933-36, the increased holdings of United States securities (9.5 billion dollars) and the rise in the monetary gold stock (5.4 billions) were the most important factors; loans actually continued to fall. Third, information on the distribution of deposits by classes of holders casts light on the question of how far the deposit expansion since 1933 has placed deposits in the hands of those who have *not* been induced, by the increase in their balances, to increase their expenditures (data from *Statistics of Income,* 1930-36, and the *Federal Reserve Bulletin,* October, 1939). The balances of most of the broad classes of holders for which data are available moved roughly with the total quantity of deposits and currency; this was conspicuously true of the "unclassified" group, which includes individual consumer balances, and which averaged some 70 to 72 per cent of the total (the other large groups being "business," "finance," and

"public bodies"). But the finance group increased both the relative and the absolute size of its balances much more than the general average, after 1933, and so did the various public bodies. The largest relative increase was in the balances of life insurance companies, though the absolute size of their balances was comparatively small. In the expansion, deposits of foreigners, too, increased disproportionately; and the accompanying gold inflows also increased bank reserves, thus contributing to falling interest rates—again without directly increasing expenditures on goods or services. The comparative unwillingness of private firms and individuals to borrow also undoubtedly reduced the effect of federal spending on the national income. Finally, and rather broadly, the changes in financial deposits thus helped to loosen the connection between changes in total deposits and the flow of expenditures, both in contraction and in expansion. Financial deposits acted to some extent as a cushion in both directions, and prevented changes in total deposits from coinciding closely enough with changes in expenditures to be satisfactory either as a forecasting device or as a guide to policy.

VICTOR M. LONGSTREET: First, the volume of deposits is now at an all-time high (estimated demand deposits in 1939 were 28.74 billion dollars), but their rate of turnover is at an all-time low, and the national money income is far under the level of the late 1920's. It follows that an unusually large volume of deposits is being held relatively idle or hoarded. On the assumption that hoards were zero in 1919 and 1929, and that the turnover rate of active deposits (estimated at 3.84 a year) has not changed materially, the volume of idle deposits can be estimated at nearly 11 billion dollars in 1939, more than one third of total demand deposits. This process of estimation is necessarily rough, and entails subtracting in 1925-30 an "abnormal" volume of active deposits used in security trading and the like (estimated at 1.6 billion dollars in 1929), but is believed to yield results broadly representative of the actual situation. Second, until 1933 hoards as thus estimated moved roughly inversely with national income, as it seems a priori reasonable to expect, but since 1933 have expanded as income rose (except in 1937). This latter behavior is probably in large part, however, a coincidence. Hoards did not grow because income rose, but rather grew in considerable measure because of the influx of foreign capital (which in 1933-39 amounted to about 4 billion dollars, or about two thirds of the estimated increase in hoards in the same period). A part of the increase in deposits spent by the federal government must also have moved into hoards, as the incomes of certain groups rose. Third, the relation between interest rates and hoards was not close in the 1920's and early 1930's, but since 1933 hoards have increased when interest rates fell, and conversely. This is not a necessary confirmation, however, of Keynesian theory; many of the groups who were probably hoarding would never have used idle funds to buy securities. Fourth, a partial analysis of deposit turnover for various economic groups shows wide differences. Turnover rates are usually highest in New York City banks holding deposits of security dealers, and in banks in agricultural and livestock marketing centers; lowest in banks holding a large volume of individual financial and personal holding company accounts. Moreover, the fluctuations in turnover rates in 1925-34 were widest in large cities; narrowest in small. Other data indicate that

turnover may have been twice as high in service and professional occupations, for example, as in mining and quarrying. These various types of information suggest that a variety of considerations other than the current money volume of transactions helps to determine the size of deposit balances held currently idle.

DONALD S. THOMPSON: In attempting to find a common denominator for the papers that have been given this afternoon one reaches the conclusion that they illustrate one point rather well; namely, that deposits as an entity is not a particularly useful concept either for economic theory or in the determination of monetary policies. What we are really dealing with is a series of categories of deposits responding differently to the various stimuli to which they may be exposed. If we combine the essentials of Mr. Machlup's analysis with Mr. Longstreet's analysis we could have situations wherein the national income was rising, the volume of deposits was remaining unchanged, and the velocity of deposits was actually being reduced. Similarly, we could postulate a situation wherein national income was increasing, the velocity of deposits was practically unchanged, and the total volume was actually declining. It is not the amount of total deposits that counts but where these deposits are located, to what use they are being put, and what they really represent. It would appear to me that more fruitful contributions to monetary and banking theory can be made from studies of the credit needs of individual businesses and industries and the effects of their operations upon the economy as a whole than by the study of deposits per se.

NORRIS JOHNSON spoke of the frequent relative insensitivity of deposits to business cycles, as in 1924 and 1937. This he attributed partly to the fact that bank loans fluctuate roughly with business activity, but that bank investment portfolios move, in substantial degree, inversely therewith. WALTER R. GARDNER said he had been struck by the wealth of illuminating detail, but also by the lack of significant broad conclusions, which the papers had exhibited. He thought that in order to get at the factors controlling the flow of expenditures, it would be necessary to bring in not only demand deposits but also time deposits, holdings of liquid bills and notes, short governments, etc. A firm holding these latter categories of assets is nearly as able to increase its current expenditures quickly as one holding demand deposits alone. The next desirable step should therefore be a series of case studies of separate firms and individuals, with respect to the behavior of their deposit holdings and the reasons for changes in the composition of their liquid assets as a whole, rather than additional broad over-all studies of deposits and turnovers. PAUL T. ELLSWORTH concluded the discussion with a general review. In particular, he questioned Professor Machlup's conclusion that brokers' loans have little deflationary effect on the industrial circulation, arguing rather that had there been no such loans in the late 1920's there would have been larger contemporary spending on consumption and investment, and a less severe financial deflation in the early 1930's.

BANK DEPOSITS AND THE STOCK MARKET IN THE CYCLE

By FRITZ MACHLUP

I. *Bank Funds, the Stock Market, Industrial Circulation*

This is not a discussion of the role and significance of the stock market in the business cycle. Assigned to me for analysis was only the relationship between the stock market and bank deposits in the cycle. Thus, the conclusions of my analysis will be concerned with the influence of the stock market upon the availability of bank funds to the industrial circulation, but they will not be concerned with other important influences which the stock market may or may not exert on industrial activity.

I need not remind you of the widely held theory that the stock market absorbs bank funds during the boom or, at least, during the later phases of the boom; and that this has deflationary influences upon industrial circulation. The conclusion of my analysis will be that such deposit absorptions and deflationary effects are possible but that they are unlikely to occur during the boom; that the net effects of the stock market via bank deposits' use upon industrial circulation are more likely to be inflationary throughout the boom. My discussion will refer most of the time to the prosperity phase, although the method of my analysis is equally applicable to other phases of the cycle.

We have almost no data on the facts in question for any cycle before the twenties. Several writers have recently denied our right to speak of business cycles since 1914. I shall not heed their warning. Most of the problems which I have to discuss have arisen during the boom of the twenties which thus is the reference period for my analysis.

The discussion of the so-called "credit absorption" problem during and after the boom of the late twenties suffered probably from the confusion between "credit" meaning bank loans and "credit" meaning bank deposits. It should be clear that he who receives bank loans generally does not retain the resulting bank deposits. An analysis which looks only into volume and distribution of bank loans and fails to look into volume, use, and distribution of bank deposits is utterly incapable of saying anything about the economic effects of particular loans. Before one can see what data are needed in this respect, one must try to orientate himself by means of a logical analysis.[1]

II. *An Analysis of the Possibilities*

Sources and Destinations of Funds. I have prepared a table which should help to clarify some of the possible sequences. On the one side of the table I have listed the immediate sources of the bank balances which may have been used in the purchase of securities; on the other side I have listed the possible subsequent destinations of these deposits.

I hope that most of the distinctions made in the table are self-explanatory. Sources 1 and 2 are previously existing bank balances; sources 3 and 4 are

[1] Credit is due to many authors—such as C. O. Hardy, W. J. Eitman, and others—who have in the past contributed to the analysis of the problem. For detailed references see my book, *The Stock Market, Credit, and Capital Formation* (London and New York, 1940).

SOURCES AND DESTINATIONS OF BANK DEPOSITS WITH WHICH SECURITIES ARE PURCHASED

Possible sources	*Possible destinations*
1. Previously inactive personal or business deposits	*a*) held by broker
2. Previously active personal or business deposits	*b*) circulating among consecutive sellers (through in-and-out trading and remittance after each sale)
3. Deposits newly created by a banking system which would not have found suitable industrial borrowers	*c*) held inactive by seller (individual or firm)
4. Deposits newly created by a banking system which is nearly "loaned up" and restricts loans to business	*d*) canceled by loan repayment to banking system which has no other suitable borrowers
	e) canceled by loan repayment to banking system which has been "loaned up" and restricted loans to business
	f) used by seller (or later payee) for "real investment"
	g) used by seller (or later payee) for consumption

Effects on Industrial Circulation of the 28 Combinations of Sources and Destinations

Inflationary:	1-*e*, 1-*f*, 1-*g* 3-*f*, 3-*g*.
Deflationary:	2-*a*, 2-*b*, 2-*c*, 2-*d*, 4-*a*, 4-*b*, 4-*c*.
Neutral:	1-*a*, 1-*b*, 1-*c*, 1-*d*, 2-*e*, 2-*f*, 2-*g*, 3-*a*, 3-*b*, 3-*c*, 3-*d*, 4-*e*, 4-*f*, 4-*g*.
Contradictory:	3-*e*, 4-*d*.

newly created balances. Destinations *a, b,* and *c* pertain to the so-called "financial" circulation; destinations *d* and *e* are deposit cancellations; destinations *f* and *g* are part of the industrial circulation.

The Sources. As to sources 1 and 2, the existing deposits, one had better distinguish between "otherwise" inactive and "otherwise" active balances, rather than "previously" inactive and "previously" active balances. However, what would "otherwise" happen to a balance is not amenable to empirical investigation. But one might perhaps arbitrarily assume that balances, if they had not been used for security purchases, would have continued in their previous employment or unemployment; and this previous employment or lack of it could be ascertained, although no such statistical information is available as yet. By idle or inactive balances I mean the minimum balances on bank accounts over a relevant period of time; that is to say, the balances which during that time have not been checked out.

Sources 3 and 4 present other difficulties for empirical work. One can never know whether it was in fact the desire for security purchases that has led to an increase in bank loans. The form and quality of a loan does not tell us much;

loans on securities may be taken to buy an automobile, a commercial loan to buy General Motors shares, brokers' loans to pay a customer who buys a truck. I am not able to offer any way out of our ignorance concerning these facts.[2]

The distinction which I am proposing here by separating source 3 from source 4 is of a different kind. It is a distinction which is both analytically important and empirically treatable. Source 3 refers to credit from a banking system with plenty of free lending capacity; source 4 to credit from a banking system which is loaned up and thus can serve one seeker of bank credit only at the expense of others.

It will be clear that the distinction between 3 and 4 is analogous to that of 1 and 2. The use for stock purchases of deposits 1 and 3 (otherwise inactive balances and balances which would otherwise not be created) can in no case involve an encroachment upon industrial circulation whereas it may involve a positive contribution to industrial circulation. The use for stock purchases of deposits 2 and 4 (otherwise active balances and balances which would otherwise be created for other purposes) can in no case involve a positive contribution to industrial circulation whereas it may involve an encroachment upon it. All depends now on the subsequent destinations of the deposits in question.

The Destinations. An absorption of bank balances by the financial sphere can take place in these three ways: (a) they may become deposits held by brokers; (b) they may become deposits circulating among occasional speculators when each of them puts his sales proceeds for a short while into his bank account before reinvesting again; (c) they may become the inactive deposits of sellers of securities who do not plan to reinvest for the time being. The separation between *a* and the other two is simple, but the separation between *b* and *c* is not. Yet, for theoretical reasons it is advisable to distinguish *b* and *c* because of the different motives of the depositors. I shall say more about all three destinations when I discuss their probable quantitative significance. At this place I mention only that destinations *a, b,* and *c* would have deflationary effects upon industrial circulation if combined with sources 2 and 4; their effects would be neutral in combination with sources 1 and 3.[3]

The effects of deposit cancellation through bank credit repayment will depend partly on the state of the banking system. For this reason one has to distinguish between *d,* the case of a banking system with no suitable outlets for funds, and *e,* the case of a fairly well-loaned-up banking system with plenty of outlets. Destination *d* will involve a final extinction, destination *e* a merely temporary extinction, of bank balances.

[2] The thought that the banker can know the use of the funds which he advances is mistaken; a loan for the purchase of raw material will release other funds for other purchases.

[3] Two interesting qualifications to this statement were suggested to me by Professor Fritz Lehmann: (1) The use of funds from sources 1 and 3 for building up deposits *a, b,* and *c,* although per se neutral, will permit of reduced security yields; these, in turn, may invite increased investment and, thus, result in an inflationary effect. (2) The use for *a, b,* and *c* of funds from source 1 would reduce excess reserves of American member banks if the funds had been in time deposits and were afterwards in demand deposits; the transfer, although per se neutral, might in this case have potential deflationary influences. If, on the other hand, the funds had been first in idle demand deposits and were afterwards in time deposits (for destination *c*), excess reserves would be released and the potential influence might be inflationary.

Deposit cancellation in connection with security transactions in the boom period have most probably a net effect of nil, especially if the bank credit repayment is nothing but the erasure of an immediately preceding credit creation. Inflationary and deflationary net effects are, however, by no means unlikely. Inflationary is combination 1-*e*, where an otherwise idle balance is used for loan repayment to a banking system which has other outlets for funds. (Illustration: A previously inactive bank balance is deposited with a broker with an order to buy securities; the sellers continue to speculate in the market, leaving the sales proceeds with their brokers; brokers' loans from banks can decline, deposits disappear, and the banks' lending capacity is released for other uses.) Deflationary is combination 2-*d*, where an otherwise active bank balance is used for repaying bank loans when the banking system has no suitable outlets for funds. Other combinations (1-*d*, 2-*e*, 3-*d*, and 4-*e*) are neutral in their effect on industrial circulation.

Destinations *f* and *g* are the cases where the bank balances received from security sales are subsequently employed on the markets for goods and services; that is to say, the deposits enter into, or return to, industrial circulation. The distinction between *f* and *g* is that between disbursement for "real investment" and for consumption. An illustration for *f* is a corporation using the proceeds from new stock issues for the acquisition of productive equipment and inventory. An illustration for *g* is a profit-taking speculator using parts of the proceeds for consumption. But surely, new funds raised by a corporation may well go into consumption and the proceeds from selling old security holdings may go into real investment.

Destinations *f* and *g*, that is, the use of bank balances on commodity markets, are clearly inflationary in combination with sources 1 and 3. They are neutral with respect to industrial circulation if combined with sources 2 and 4.

We have seen from this sketch that the use of funds for stock purchases may be inflationary, deflationary, or neutral with regard to industrial markets. In the controversy about the so-called "credit absorption" by the stock market one side contended in effect that destinations *a*, *b*, and *c* were prevailing during the boom, the other side held that destinations *f* and *g* were prevailing. Statistical evidence was not available and most of the facts submitted as corroboration for the particular thesis could not possibly prove what they were supposed to prove. As long as our statistical information about distribution and utilization of bank deposits is not more complete we can do no better than extend our logical analysis to the question of the comparative probabilities[4] of the various combinations shown in our table.

III. *An Analysis of the Probabilities*

Brokers' Bank Balances. With regard to destination *a*, that is, to the use of (previously existing or newly created) bank deposits for augmenting the cash balances of brokers, we do have statistics from the fall of 1935 on. If it is at all meaningful to compare these brokers' bank balances at the end of a month with the volume of transactions during the month, one may be impressed by

[4] The probabilities of the different combinations are of course not expressed in number of cases but in dollar value of the balances involved.

the absence of any significant degree of correlation or of concurrent deviations. Similar comparisons of the volume of brokers' cash balances with other stock market indices such as stock prices, brokers' loans, etc., show likewise no correlation and no concurrence of change. This would not rule out that such concurrence might have existed during other periods for which we have no figures, for example the 1928-29 boom. So it is well to examine all possible motives for a substantial increase in brokers' bank balances which might occur in consequence of increased stock market activity.

The following hypothetical reasons for increased balances have been advanced. First hypothesis: Increased customers' deposits with brokers may cause the brokers to carry larger bank balances. Objection: Brokers have no reserve requirements. They meet sudden withdrawals by borrowing from the banks and need not carry higher cash reserves. Second hypothesis: Increased in-and-out payments from and to customers would automatically make for high bank balances of brokers. Objection: Brokers have the possibility of adjusting almost perfectly, through their borrowings and lendings, the credit balance on their bank account. Unlike the corner grocery store, the brokerage firm need not have a larger cash balance at the close of the day's business than it wants to have. Third hypothesis: When brokers' borrowings from banks increase in consequence of increased buying on margin, brokers may be compelled to carry with the lending banks so-called "compensating" balances, i.e., minimum balances which must not be checked out. Objection: Such rules concerning service balances (of about 10 or 15 per cent of the amounts loaned), which some banks impose on commercial borrowers, are usually not imposed on brokers. Fourth hypothesis: As the volume of stock trading rises, the clearing balances between brokers increase and must be settled by check payments; for this increase in payments brokers must carry higher balances. Objection: Apart from the fact that it is not the increase in stock trading as such but rather an increase in unevenly distributed business among different brokers which gives rise to the increase in clearing balances, it is by no means true that increased bank balances are needed for the settlement. Arrangement of new and repayment of old brokers' loans can take care of the settlement without leading to higher bank deposits.

More important than all the arguments for or against the contention that substantial increases take place in the brokers' bank balances is the fact that brokers' balances are an altogether insignificant amount in relation to the deposits in industrial circulation. During the last four years for which the Federal Reserve Board has figures, brokers' bank deposits moved between 179 million dollars as a low and 268 million dollars as a high. Expert estimates contend that the figures were much lower in the late twenties. Now if a violent boom could make the highest of these figures go up by 100 per cent and if the increase were at the expense of other groups of depositors, the "absorption" would amount to less than 1 per cent of existing bank deposits. In other words, destination *a* does not count.

Speculators' Bank Balances. My argument with regard to destination *b* is on less firm ground, though it is, I believe, sufficiently safe for the forming of a general impression. Destination *b,* in our list, is the use of bank deposits (of

individuals and firms other than brokers) for repeated in-and-out trading in securities. It is, thus, not the bank balance of the seller who has definitely withdrawn from the stock market and keeps the deposit idle or merely waits to use the funds in his business or for his consumption. Bank deposits *b* are actively passing from account to account, each single owner disposing of his balance when he buys securities, receiving it again when he sells, and disposing of it again when he buys another stock which he considers more attractive.

The objection against the hypothesis that large amounts of balances *b* encroach upon other spheres of circulation is this. The typical American speculator on large or on small scale would not bother each time to take the proceeds from selling his stock "home" to his bank account as long as he wants to buy another stock. He who sells in order to buy again usually leaves his credit balance with his broker (who does not thereby increase his own bank balance). The monetary circulation among the in-and-out traders does not take place on their bank accounts but on their brokerage accounts. The seller is credited on his brokerage account, and debited again when his new buying order is carried out. Bank balances are usually not in the game until a seller decides not to buy any more for the time being, but rather to withdraw and to ask the broker for his check.

It has been said, however, that in the days of highest speculative fever the ranks of speculators were joined by many common people who actually would "take home" their money after each round of the game and leave it for a short while with their banks until they got into the market for another round. If their stock purchases were originally financed by otherwise active personal or business deposits, an increase of these *b* balances would actually constitute deflationary deposit absorption for stock market transactions. It is, however, more probable that the original stock purchases of the newcomers to the stock market were largely financed out of otherwise inactive deposits, especially savings deposits; and this would neutralize the accumulation of *b* balances. (Combination 1-*b* is neutral; 1-*f* and 1-*g* are inflationary.)

One may add that the speculative fever is apt to rise so high (as to attract the peculiar group of people which operate on bank balances rather than brokerage accounts) only if an inflationary movement has proceeded quite far. Any "deflationary" effect of the increase in *b* balances would then not be a net effect but rather an induced response to the inflation that has been going on; at best it would be a partial offset and slow-down of the continuing monetary expansion.

Before proceeding to destination *c* one ought to mention that probably most of the authors who spoke of the considerable deposit absorption by the stock market meant stock market transactions (hence, destinations *a* and *b*) and not induced hoarding by those who abstained from transactions (i.e., destination *c*). Really significant augmentations of balances *a* and *b* are, however, very unlikely. This seems to be established beyond doubt as far as *a* is concerned; with regard to *b* we can only point to the above reasoning for what it may be worth.

Hoarders' Bank Balances. Destinations *a* and *b* were not taken seriously by Mr. Keynes, who was the most prominent author to emphasize the importance

of destination *c*. This is an increase in idle balances which is said to accompany increased securities prices. The increase is explained by the properties of the liquidity preference function as determined by the so-called "speculative motive" of holding idle cash balances. If securities prices are very high and their yield, therefore, relatively low, and the chance that prices will soon fall is felt to be greater than the chance that they will rise further, then many people will get out of the security market and will stay out. They will prefer to be liquid; that is, according to Mr. Keynes, they will prefer holding cash balances to holding securities. Thus, while the bulls might use otherwise active or newly borrowed funds for the purchase of securities, the bears would keep their proceeds idle. Destination *c* would absorb balances, the effect being neutral if they came from sources 1 and 3, but deflationary upon industrial circulation if they came from sources 2 and 4. The latter is held by Mr. Keynes's theory.

No direct evidence is available to test or disprove this theory. One indirect piece of evidence might be taken as speaking against the theory: the figures on the velocity of circulation of bank deposits. If it were true that old, active deposits and newly created deposits were condemned to idleness in the later phases of the boom, there would be a tendency for the velocity of circulation of bank deposits to decrease. We know from our statistics that velocity increased greatly during the boom of the twenties and probably also during other boom periods. Of course, it may have been other things which overshadowed such a tendency, for instance, the increase in purely financial transactions. Yet, even if New York City figures are eliminated and if the figures for banks outside of New York were corrected for any conceivable increase in financial turnover, there would remain, I think, a sufficient increase in velocity to call seriously in question the quantitative importance of destination *c* during the boom.

But we need also a theoretical argument which could explain why Mr. Keynes's theory, which sounds perfectly plausible, should not have been realized during the boom of the twenties. That larger amounts of liquid funds are demanded when security prices are regarded as too high by many capitalists seems so probable a development that one can hardly cast doubt on it. The desire for liquidity of these bearish security sellers can, however, be satisfied by other things than idle cash balances. First-class short loans may at times be just as desirable an asset or perhaps more desirable because they combine yield with liquidity. And since the bullish buyers of securities are anxious to borrow on margin, we can find in the secured call loans the liquid assets to satisfy the sellers' liquidity preference. Why carry idle bank balances with no or little interest when one can make perfectly secure call loans at attractive interest rates? Here, incidentally, we find the explanation for those mysterious 3½ billion dollars of "brokers' loans on account of others" which alarmed the authorities in 1929. These call loans—instead of idle bank balances—were the liquid assets of those who did no longer wish to hold securities (or to buy other high-priced assets), and at the same time they enabled those who wanted to hold securities to do so without the use of bank loans.[5]

[5] J. Tinbergen, in his *Business Cycles in the United States of America, 1919-1932* (Vol. II of *Statistical Testing of Business-Cycle Theories*, League of Nations, 1939) assumes for his "model" that individuals and firm (other than banks) have no demand for short claims. This assumption may invalidate some of Tinbergen's conclusions.

I submit that the larger part of these "brokers' loans on account of others" did not represent either absorbed bank balances or absorbed credit facilities or absorbed funds of any sort. Sellers of securities, old or newly issued, used the proceeds for making loans to the stock market, i.e., indirectly to the buyers of their securities. The buyers, in this case, did not use any funds for the purchase; the sellers did not receive any funds from their sale. With regard to these amounts of brokers' loans on account of others, that is, to the extent that these loans financed securities purchases, one may say that the buyers (who used these loans) did not possess any funds which they might have used for buying anything other than the securities, and the sellers (who financed their security sales through these loans) did not possess any funds which they might have used for loaning to anybody other than the margin buyers. In other words, a large part of the brokers' loans in 1928-29 were nothing that could have been at the expense of other economic spheres. The bulls wanted securities and offered their secured call-loan debts; the bears offered securities and wanted secured call-loan claims. The banks acted as middlemen—they could not do it under the present laws—but they were in substance no direct party to that exchange of long-term securities against demand loans.[6]

An obvious objection to my theory would be that not every bearish seller would have the experience and the connections to make loans to the stock exchange; only the big bears, large corporations, and wealthy capitalists would be able to do it. This is probably so; but were not the little fellows without experience and connections exactly those who held on longest to their stocks and were finally caught when the market broke? The few little bears who sold and began holding bank balances while the boom was still on, were probably greatly outnumbered by the many little bulls who joined late in the game and mobilized their otherwise inactive savings deposits in the final phase of the boom.

The building up of excessive idle bank balances (destination *c*) thus does not seem to have been a general development of the boom period. It is in the downswing[7] that the deflationary force of destination *c* becomes fully effective. When security owners liquidate their holdings and have no margin loans to pay and no margin loans to give and no attractive real investments to make, then they will keep idle the balances of those who buy the securities out of their previously

[6] Here is a schematic illustration of the loans of sellers to buyers as reflected in the movements in the brokers' balance sheets:

All brokers

Cash in banks		Deposits of customers	
Loans to customers	+	Loans from banks	
		Loans on account of others	+

[7] The liquidation during the first phase of the downswing may be mainly on the part of new bears who cannot build up idle balances. The former bulls, suddenly transmuted into bears, have to pay their margin debts. If the former bears are now willing to buy back at reduced prices, the margin loans can be liquidated as easily as they were built up, without any bank balances in the play. In subsequent phases of the downswing, however, the sellers who could not realize enough to settle their debts have to use current savings (otherwise active balances) to pay up (2-*d*), and the sellers who could realize more than they needed for debt payments begin to pile up idle bank balances (2-*c*).

active funds; then combination 2-*c* has started its deflationary work. But nobody has doubted that there was deflation during the downswing.

Real Investment and Consumption. I do not think that an increase in balances *a, b,* and *c* during the boom can be denied. But I believe that the probabilities of these destinations (measured by amounts of funds) are smaller than the probabilities of funds flowing from sources 1 and 3. ($1 + 3 > a + b + c$.) This means not only that deposit absorption in *a, b,* and *c* is likely to be perfectly neutral but also that there is probably an excess from the sources 1 and 3 going into destinations *f* and *g*. The net effect, obviously, would be inflationary.

I should now expect a challenge to show that destinations *f* and *g* (real investment and consumption) were actually realized to such an extent as to absorb the vast amounts that have flown onto the stock market and, according to my contentions, have not gone into destinations *a* to *e*.

There is no way of telling how much has flown onto the stock market. But must I not submit proof that at least the eight or nine billions of brokers' loans of 1929 have gone into real investment or consumption? I would not know how to prove this and I do not have to prove it. I showed before that a large part of these brokers' loans were not bank balances, not actual funds, not purchasing power for anything other than securities. They were, to an important extent (perhaps the bulk of the 1928-29 increase), debts of the buyers of shares to the sellers of shares.[8] Thus, large parts of these "brokers' loans on account of others" could be used for real investment or consumption no more than they could be piled up as idle balances. The rest of the brokers' loans represented bank funds, old or new, a large portion of which entered the industrial markets and probably contributed to the increase in real investment and consumption that took place during the years under consideration. For this inflationary increase stock speculation was, I believe, in no small measure responsible.

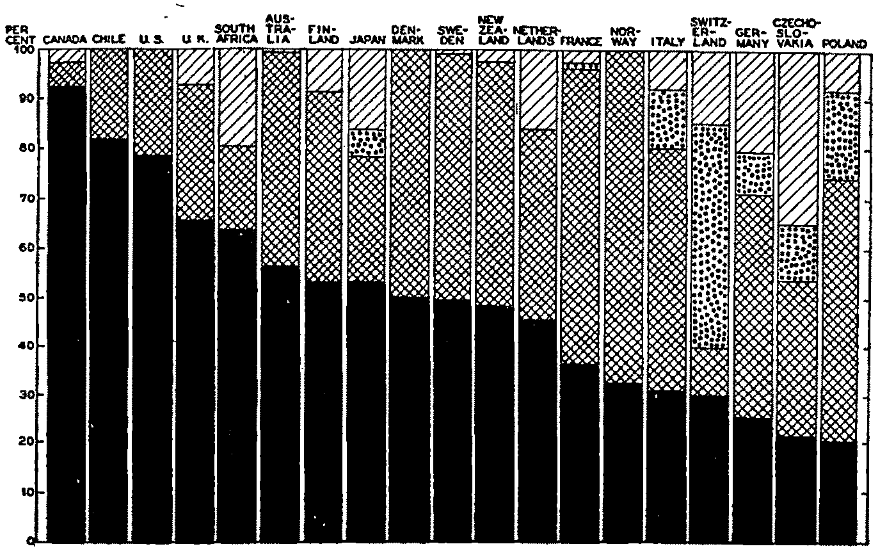
[8] From September, 1927, to September, 1929, brokers' loans of New York City banks for own account and for account of out-of-town banks increased by 552 million dollars while their brokers' loans for account of others increased by 2,726 million dollars.

BEHAVIOR OF BANK DEPOSITS ABROAD

By RIFAT TIRANA

In most discussions on the behavior of money in general and of bank deposits in particular attention is almost exclusively centered on the accounts of institutions going by the blanket description of "commercial banks." In a few cases this restriction of attention is dictated by the absence of complete data. More generally, however, it is due to a theoretical predilection in favor of the more familiar institutions one has been taught to regard as the principal channels or vehicles of the monetary ebb and flow. The present note has a twofold purpose. The first is

1 – DISTRIBUTION OF AGGREGATE DEPOSITS AMONG FOUR GROUPS OF DEPOSIT-RECEIVING INSTITUTIONS END OF 1936



to draw attention to the existence of important deposit receiving institutions other than commercial banks and thereby to point out that the usual procedure of ignoring them leads to overlooking essential factors in the behavior of the monetary system. Secondly, the note attempts to examine briefly the extent to which the available deposit series for certain countries abroad display, despite the diversity of their content and significance, common features in their broad movements.

The broad differences in the banking structure as between countries are illustrated by Diagram 1. This shows roughly the percentage distribution of aggregate banking deposits among four groups of deposit receiving institutions other than central banks at the end of 1936 in nineteen countries.[1]

[1] The figures used are total deposits; the aggregates involve a certain amount of double counting because it has not always been possible to exclude interbank deposits. The insti-

The lumping together not only of different kinds of deposits of the same type of institution but also of the totals of various types of deposit receiving organizations calls for certain comments by way of justification. In the first place, it should be pointed out that in the majority of countries the differences between various types of institutions are largely nominal or legal, and that such variations as have existed in the degree of specialization have increasingly narrowed throughout the postwar years. Secondly, the distinction between types of deposits is rarely as clear cut as it is in this country. Legal definitions are not common; when they exist, or when convention or tradition provides for a separation of deposits into distinct types, such separation is often not enforced in actual practice.

The juxtaposition of the disposable funds of commercial banks and of other deposit receiving institutions is justified on other grounds. Broadly speaking, the accounts of commercial banks are affected to a very large degree by foreign developments, foreign trade and capital movements in the case of the bigger countries, and the course of foreign commerce in that of the smaller countries. The accounts of the other deposit receiving institutions, on the other hand, may be said to reflect principally domestic conditions. The movements of the accounts of these two big groups may be expected to be similar only in cases where the national economy is extremely dependent on foreign trade. In fact, these movements are frequently divergent. For these reasons the behavior of important deposit receiving institutions other than commercial banks throws considerable light on developments reflected only with a considerable lag by the accounts of the commercial banks. An obvious example is the English building boom of the early thirties. This boom, which is generally considered to be the major contributing factor to the recovery in England, Sweden, and Finland, was financed through the building societies. Equally significant are the illustrations afforded by Japan, Italy, and Germany, where the employment creation programs and recovery were initiated outside the commercial banking system. In Italy and Germany deficit financing was successfully carried through regardless of the condition of the commercial banks which continued critical until very recently.

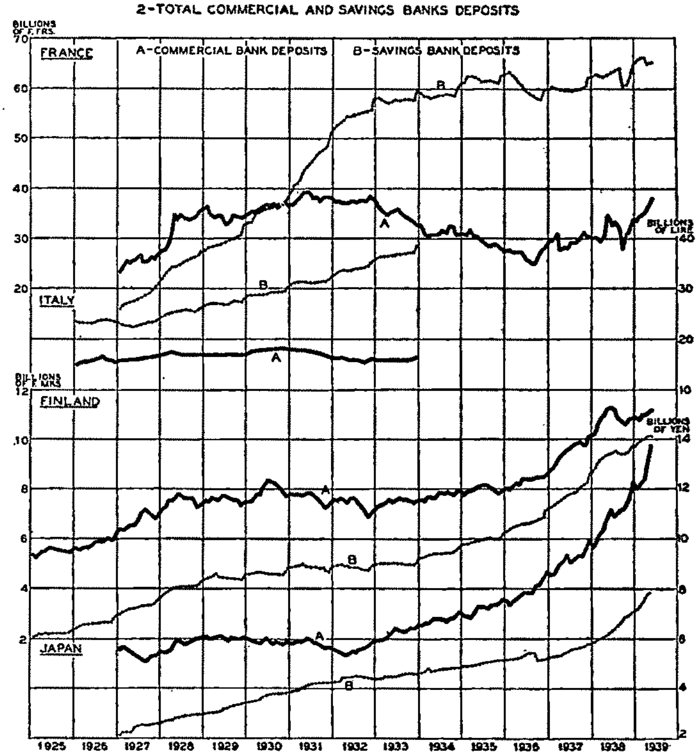
A detailed study of the relationships between the accounts of various groups of deposit receiving institutions is not possible owing to the absence of comprehensive data. An attempt at a rough illustration of one of these relationships may be made on the basis of the figures plotted in Diagrams 2 and 3.[2] These show

tutions covered are all those for which data are available. As in numerous cases comprehensive data on all deposit receiving institutions do not exist, the figures used for the diagram tend to exaggerate the relative importance of commercial banks. The division into four groups is approximate and not necessarily consistent throughout. The first group comprises all "commercial" or joint-stock banks. For the United States the group includes all banks other than mutual savings banks. The second group includes ordinary savings banks, postal savings banks, and other savings banks. Public banks are those owned and run by local governments, e.g., the Swiss Cantonal banks, or by the central governments, e.g., the "Special" banks in Japan. The last group is heterogeneous, and comprises one or more of the following types of institutions: peoples' banks, credit associations, building and loan associations, trust and finance companies, and mortgage or agricultural banks receiving deposits from the public.

[2] *Explanation to Diagrams:* Diagram 3 is drawn to a scale different from that of Diagram 2. *France:* A = 4 leading deposit banks (deposits include correspondent creditors); B = Caisse Nationale and Caisses d'épargne privées. *Italy:* A = 4 (3) leading commercial banks (deposits include correspondent creditors); B = ordinary savings banks and post

the monthly movement since 1925 of the total deposits of commercial banks and of savings banks in six countries. The figures are not as comprehensive as the yearly data used for Diagram 1, but they may be taken to be fairly representative, on the one hand, of the movement of commercial bank deposits and, on the other, of the evolution of deposits with other institutions except, perhaps, for Italy and Japan. In the case of these two countries the inclusion of the deposits of public banks and other credit institutions with those of the savings banks would probably accentuate the trend of the latter to a striking degree.

2-TOTAL COMMERCIAL AND SAVINGS BANKS DEPOSITS

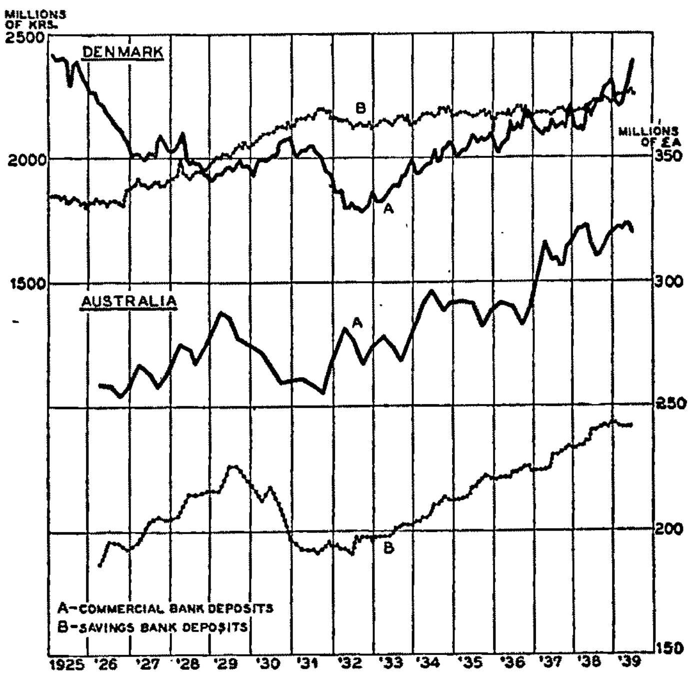


Attention may be drawn to three broad features disclosed by the series. The first is the fact that the present relative importance of savings banks is not of recent origin or solely a product of the Great Depression. The relative growth of savings banks and of the other deposit receiving institutions represented by them is a distinct postwar phenomenon which becomes noticeable with the cessation of the inflation of the early twenties. Secondly, apart from seasonal variations, the growth of savings banks deposits has not been erratic, and, apart from Australia, has been in general steadily upward. Thirdly, except for Australia

office. *Finland:* A = all commercial banks; B = ordinary savings banks, P. O. savings banks, and consumers co-operative societies. *Japan:* A = all clearing house banks; B = ordinary savings banks and P. O. savings banks. *Denmark:* A = all commercial banks; B = ordinary savings banks. *Australia:* A = trading banks; B = ordinary savings banks and Savings Bank Department of the Commonwealth Bank.

where the two series move in a parallel direction until the middle of 1931, the movement of savings bank deposits is not subject to a cyclical pattern closely resembling that of commercial bank deposits. In fact, the two series disclose distinct divergent movements for the greater part of the period covered by the diagrams in the case of Italy, France, and Denmark. Further, the rate of growth of savings banks deposits in Finland is greater than that of the commercial bank deposits throughout the years under review, and a similar occurrence is observable in Japan until about 1934.[3]

3 - TOTAL COMMERCIAL AND SAVINGS BANKS DEPOSITS



The significance of the developments just described may now be briefly discussed. In passing, stress may be laid again on the obvious inference that monetary analyses based on a study of commercial bank accounts alone are bound to be, in the case of an important group of countries, inadequate, if not misleading. The large growth of deposits and its increasing concentration in institutions other than commercial banks are manifestations of the same postwar phenomenon; namely, the growing importance of the state. The shift from the stocking to a deposit account no doubt played a role. It would appear,

[3] Monthly data are not available for other countries where similar developments may be observed. From annual series it may be said, however, that the experience of Germany, Bulgaria, Poland, Czechoslovakia, Yugoslavia and, to a lesser degree, the Netherlands, was broadly similar to that of France. The evolution of deposit receiving institutions other than commercial banks in Switzerland resembles somewhat that of Denmark, while this evolution in Sweden and Norway follows largely the Finnish pattern. Developments in this field in New Zealand and South Africa are not unlike those in Australia.

however, that the main contributing factor was the increasing demand of the state for capital. The expenditure of this capital, together with other governmental measures, when not leading to increases in national income, tended, at least, to distribute that income more evenly. Increases in national income or its more even distribution were accompanied by the development of thrift among classes which before the war were not accustomed or in a position to save, or to save to a like extent. It is not an accident that the divergent evolution of commercial banks and of other deposit receiving institutions should be most marked in countries most adversely affected by the war and where the demand of the state for capital has grown rapidly.

These "new" savings have been mostly entrusted to institutions other than commercial banks; namely, savings banks, people's banks, mutual credit associations, building societies, and public credit organizations. This development is not surprising, partly in view of the source of the savings and partly owing to the fact that institutions other than commercial banks had certain distinct advantages for the small saver. They catered to his needs, often paid higher deposit rates, and they frequently enjoyed the guarantee of the public authorities. When this guarantee was not direct, the average depositor believed that deposits with savings institutions were more likely to be guaranteed by the state if bankruptcy was threatened than were those with the commercial banks. The last factor, together with the existence of an intermediate class of depositors having no preferences in favor of commercial banks or of other credit institutions, helps to explain the inverse relationship between the movement of deposits with commercial banks and other credit institutions. This inverse relationship is especialy noticeable in the series given for France, Denmark, and Italy in Diagrams 2 and 3. In these three countries national income is or has become comparatively more evenly distributed and hence the intermediate class of depositors relatively more important. Further, in the three countries, commercial banks, whether large or small, compete with other institutions for the savings of the small and intermediate depositors.

The relative immunity of institutions other than commercial banks to foreign developments arises in part from the nature of their clientele and their transactions and in part from the absence of any link with the central monetary authorities. Few, if any, of these institutions come under the jurisdiction or suasion of the central bank, and they rarely have recourse to it for assistance. This reinforces their independent position, and enables them to pursue a policy—usually expansionist—either in disregard of or contrary to the policy of the central bank. This is particularly true of big organizations such as the Caisse de Depôts et Consignations in France, the Cassa dei Depositi e Prestiti in Italy, and the Treasury Deposit Bureau in Japan. The first controls practically the whole of the funds outside the commercial banking system, and the last two manage an important part of such funds. By way of summary, it may be said that the increasing capital requirements of public authorities have been accompanied by an expansion of national income and its more even distribution which has led to the growth of thrift and credit institutions other than commercial banks, and, further, that the investment policy of these other institutions, often controlled or determined by governmental agencies, has permitted

in turn the public authorities "to feed on what they had created."

Having provided a general background in terms of which the significance of commercial bank deposits abroad may be interpreted, consideration may now be given to the movements of those deposits in certain countries abroad.[4] The deposits of particular interest from the point of view of the behavior of money are those termed in this country "demand" deposits. Before considering their behavior it appears necessary to examine the relation of demand deposits to other deposits, the significance of demand deposits in "the monetary circulation," and the relative changes in the composition of deposits.

It has already been pointed out that there is no clear cut distinction in law or in practice as regards types of deposits in most countries abroad. The figures in the accompanying table, which shows the percentage ratio of demand to aggregate commercial bank deposits at the end of 1913 and at the end of each year since 1925 in fourteen countries, afford, therefore, only a rough measure of this ratio.[5]

Reference may be made to three features brought out by the table. The first relates to the wide differences it discloses with respect to the ratio of demand to aggregate deposits from country to country, this ratio ranging at the end of 1937 from 96.3 per cent in the case of the French deposit banks to 20.5 per cent in the case of the Swiss banks. These differences reflect variations in the character of commercial banking systems and in their practices and traditions, as well as the lack of similarity in national economies and in their development.

PERCENTAGE RATIO OF CURRENT ACCOUNTS AND SIGHT DEPOSITS TO AGGREGATE DEPOSITS OF COMMERCIAL BANKS

End of	*1913*	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*
Argentine	39.9	38.0	37.9	37.8	36.7	30.9	31.3	28.4	31.3	34.6	33.5	31.7	35.1	36.1
Australia*	41.6	43.3	42.1	40.7	38.6	33.3	30.9	31.1	32.1	33.8	36.2	37.2	37.9	37.4
Canada	36.2	27.7	27.3	29.1	29.0	30.4	27.7	29.5	24.0	25.1	26.6	27.1	27.7	27.4
Denmark	8.1	27.8	26.1	28.0	28.5	27.7	29.1	27.8	28.2	28.6	27.6	27.4	28.4	29.3
Finland	45.5	23.7	23.8	24.3	20.8	19.9	20.2	22.2	22.5	23.6	19.9	20.3	21.2	22.4
France (deposit banks)	93.0	96.7	96.7	96.9	96.0	92.7	92.2	93.8	94.2	94.9	95.0	95.2	95.9	96.3
Germany (big Berlin banks)	58.6	51.6	50.1	42.9	41.7	41.8	45.8	52.3	48.2	47.3	49.8	47.0	49.8	52.2
Netherlands	55.2	54.0	52.1	48.1	47.1	46.8	48.3	47.1	54.5	55.3	57.0	59.9	61.4	68.5
New Zealand*	51.4	55.9	52.5	49.8	46.3	39.5	32.9	31.1	32.9	35.3	39.5	46.0	52.7	53.8
Norway	4.6	7.2	10.5	9.7	10.2	11.7	11.8	11.4	11.2	9.9	11.8	13.2	14.5	13.8
Sweden	13.4	20.1	19.8	19.5	19.2	18.9	18.8	17.2	17.6	18.6	19.6	21.1	23.3	24.6
Switzerland	23.5	30.6	31.0	30.4	28.7	27.5	15.5	17.2	17.4	16.6	15.5	13.8	18.5	20.5
United Kingdom (London clearing banks)	—	57.6	57.3	56.2	55.8	54.0	53.9	50.6	50.7	53.0	53.4	55.2	56.0	55.6
South Africa	52.6	55.6	55.0	55.3	53.8	49.5	45.6	46.4	47.2	61.7	62.2	64.9	70.6	64.1

* End of June of the following year.

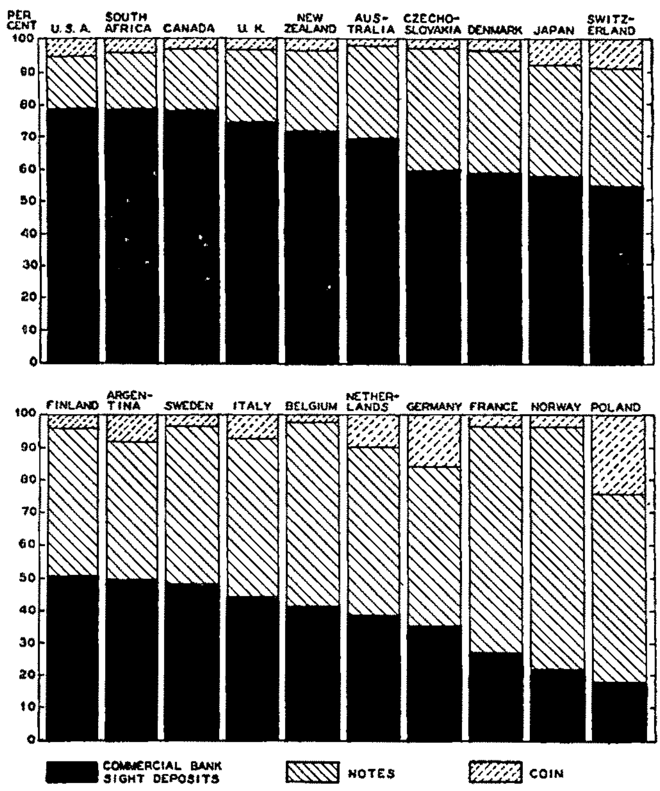
Another noteworthy feature of the table is the difference in the level of the ratio of demand deposits as between 1913 and postwar years. It will be noticed that this ratio during the major part of the postwar period was lower than

[4] It should be pointed out that the choice of illustrative material in this as well as the preceding section has been restricted to data readily available at the Federal Reserve Bank of New York. Source references have been left out in order to save space and facilitate reading. The monthly data have been drawn from original official sources, while the yearly figures are largely those contained in the League of Nations publications, in particular *Money and Banking* and the *Monthly Bulletin of Statistics*.

[5] It should not be overlooked that the figures are also influenced, *inter alia*, by changes in official classifications and in the number of reporting banks.

in 1913 in the Argentine, Australia, Canada, Finland, Germany, New Zealand, South Africa, and, to a less striking extent, in the Netherlands and Switzerland. The explanation for this shift would appear to be found principally in the development of thrift and in the decline in the habit of direct investment prevalent in prewar days. In the postwar period the commercial banks in these countries competed with other credit institutions for the "new" savings of the lower income classes referred to in the previous section, and also offered facilities of deposit to those who, as a result of bitter war or early postwar

4 - CURRENCY COMPOSITION OF CERTAIN COUNTRIES: END OF 1936



experience, preferred not to invest their savings directly but to keep them in safety and relative liquidity in a time or savings deposit. The ratio of demand to aggregate deposits was, on the other hand, generally higher than in 1913 in Denmark, Norway, Sweden, and France. In the Scandinavian countries this development would appear to be due partly to the postwar commercial expansion of these countries and the consequent rise in the purely commercial transactions of the banks, and partly to the fact that the "new" depositors were catered to increasingly by the other credit institutions. This latter factor would seem to

account also for the change in the demand deposit ratio of the French banks.

The end-of-year movements of the ratio of demand deposits in different countries do not disclose a consistently regular pattern. One can, however, distinguish two groups of countries; namely, the "Anglo-Saxon" group comprising the countries of the British Empire, Argentina, Sweden, Finland, and Denmark, and the "former gold-bloc" group consisting notably of France, the Netherlands, and Switzerland. The changes in the ratio of the first group of countries display broad similarities and are of cyclical significance; the latter will be referred to later in connection with Diagram 5. The significance of the annual changes in the demand deposit ratio of the second group of countries is more obscure and does not lend itself easily to broad statements. In general, these changes reflect international movements of capital or variations in liquidity preferences.

Only passing reference need be made to the second point raised at the opening of this section; namely, the significance of commercial bank demand or sight deposits in the "monetary circulation." The differences in the importance to be attached to some of the series found below are very roughly illustrated by Diagram 4. The figures on the basis of which the percentage currency composition has been computed represent the sum of commercial bank deposits, and notes and coins in circulation less amounts estimated to be held by central banks. The total, therefore, excludes central bank sight deposits and note and coin holdings of commercial banks.

The significance of changes in the relationship between commercial bank demand and time deposits in countries where English banking practices prevail has been explained in some detail by Mr. Keynes.[6] It will suffice, therefore, to restate this briefly, and then to examine the actual changes in this relationship. In countries where English banking practices prevail one may distinguish two categories of time ("savings" in Keynesian terminology) deposits. The first type represents the accounts of owners of wealth who, for various reasons, keep this wealth in the form of time or savings deposits. The second category represents the accounts of business and other people who, in Keynesian terminology, are ordinarily "security" holders. The amount of the former category, due to its origin, may be expected to change slowly, whereas the amount of the latter will vary with changes in the market sentiment—bearish or bullish—of the holder of the account. Sudden or wide changes in total time deposits are, therefore, likely to reflect changes in the second category of time deposits. They may also represent a transfer from demand to time deposits; the latter earn more interest, and are usually withdrawable at short notice. An increase in time deposits either absolutely or relatively to demand deposits has important deflationary effects. A shift from demand deposits entails a corresponding contraction of the means of payment where banks work to a stable cash ratio against aggregate deposits.

The movements of commercial bank demand and time deposits may be examined on the basis of the absolute monthly figures for these deposits in Australia, Canada, England (London Clearing Banks) and the Argentine

[6] *A Treatise on Money,* Vol. I, Chap. 3 and 15, pp. 249-257, and Vol. II, Chap. 23.

plotted in Diagram 5.[7] The sum of the two series represents aggregate deposits except in the case of the Argentine where this would include a relatively insignificant and stable group of "miscellaneous accounts" comprising chiefly judicial deposits.

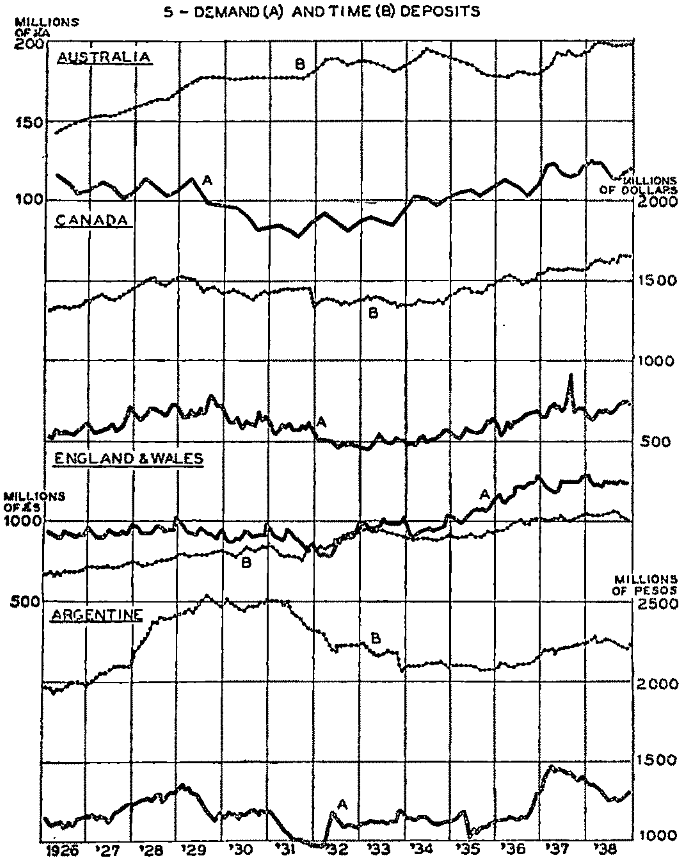
The series for Australia and the Argentine may be considered first. The fall in raw material prices affected both countries about 1928, and the low point of business conditions was reached in 1931-32. In the early phase of the depression time deposits rose faster than demand deposits, to be followed later by a fairly sharp decline in demand deposits while time deposits remained relatively stable. Though both countries tried expansionist schemes in a halfhearted and unsystematic manner about the depth of the depression—in Australia the Premiers' Plan of 1931 and in Argentina the rediscounts of commercial paper by the Banco de la Nacion with the Caja de Conversion of 1931 and 1932 and the Patriotic Loan of 1932—the course of economic conditions was determined essentially by foreign trade developments. The improvement in the foreign trade of Australia came much earlier and was on the whole more substantial than that of the Argentine thanks to developments in the wool market. This improvement was accompanied by a fairly steady rise of demand deposits. Time deposits remained fairly stable until the middle of 1934, when trade conditions had improved substantially, fell thereafter, to pick up again in 1937 and 1938 when the value of exports ceased to rise and the export surplus was shrinking. The movement of the two series in the Argentine was closely parallel from the severest phase of the depression until the second quarter of 1935. The substantial rise in the value of the export surplus from that date until the second quarter of 1937 was accompanied by an expansion of demand deposits. With the gradual disappearance of the export surplus during the remainder of 1937 and the emergence of a trade deficit in 1938 demand deposits fell sharply and time deposits showed a rising tendency.

[7] Detailed classifications of demand and time deposits are generally not available. The following annual figures relating to the Canadian chartered banks are available as from October 31, 1934. Though not as illuminating, they invite comparison with the analogous data on American banks published in the *Federal Reserve Bulletin* of September, 1936, and October, 1939. Such a comparison, however, is beyond the scope of this note.

	NUMBER Thousands					*AMOUNT Millions of Dollars*				
As at October 31	*1934*	*1935*	*1936*	*1937*	*1938*	*1934*	*1935*	*1936*	*1937*	*1938*
Demand deposits:										
$1,000 or less	580.9	574.3	580.0	596.8	604.5	71.8	76.0	81.7	84.9	88.1
$1,000 to $5,000 ...	35.3	39.3	43.6	47.4	50.1	72.3	80.1	89.7	97.8	102.4
$5,000 to $25,000 ..	8.6	9.4	10.5	11.4	12.0	88.7	95.4	108.4	114.8	121.5
$25,000 to $100,000	1.9	2.1	2.3	3.5	2.7	87.5	99.7	107.7	115.5	125.4
Over $100,000	.6	.8	.7	.8	.9	218.4	271.0	279.8	264.1	306.1
Adjustment items ..	—	—	—	—	—	+3.9	+2.7	—3.0	+2.0	+5.8
Total demand deposits	627.3	625.9	673.1	660.0	670.1	542.4	624.9	664.3	679.1	749.4
Notice deposits:										
$1,000 or less	3766.0	3716.3	3664.8	3770.7	3797.5	416.5	425.9	432.5	456.0	452.8
$1,000 to $5,000 ...	246.1	263.4	268.5	274.8	284.2	485.7	518.5	537.1	551.4	571.7
$5,000 to $25,000 ..	28.9	32.5	34.2	36.3	38.1	249.6	280.9	297.6	315.6	331.0
$25,000 to $100,000	1.9	2.3	2.3	2.4	2.5	82.6	99.8	99.1	103.6	111.9
Over $100,000	.4	.5	.5	.5	.6	131.6	136.2	141.3	154.1	185.2
Adjustment items ..	—	—	—	—	—	+4.2	+4.3	+2.6	+3.0	+3.2
Total notice deposits	4043.2	4015.0	3970.3	4084.8	4123.0	1370.2	1465.6	1510.3	1583.7	1655.8

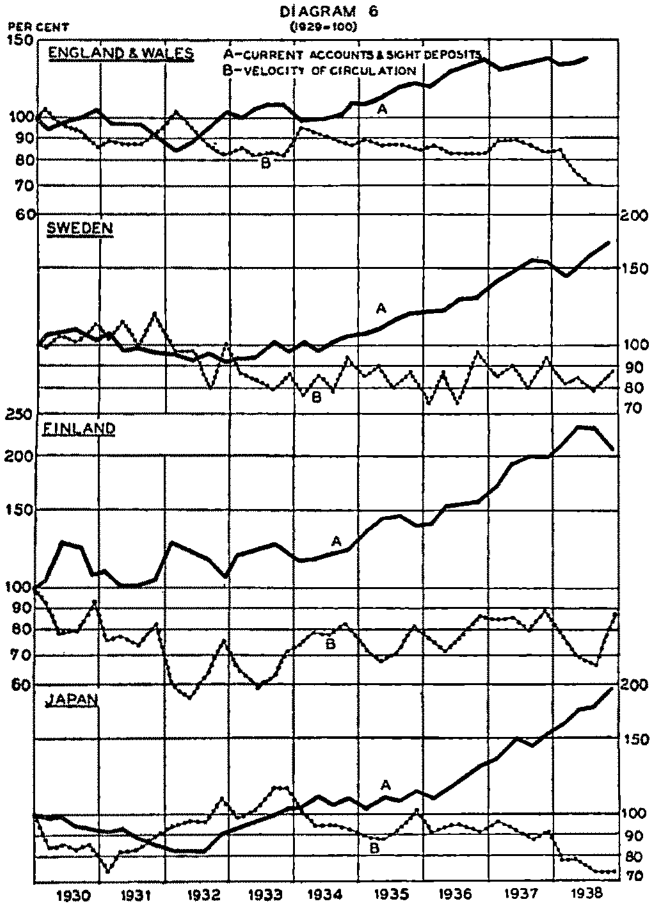
The movements of the two series for Canada[7] and England do not disclose any striking similarity until after the early part of 1933. From the beginning of 1926 to the end of 1929 total deposits rose sharply in Canada whereas the rise in England was only moderate. During the same period the ratio of demand to time deposits increased steadily and substantially in Canada, while in England this ratio showed a distinct declining tendency. These differences are not surprising in view of the divergencies during this period in the industrial and trade development of the two countries. From the end of 1929 to the early

5 – DEMAND (A) AND TIME (B) DEPOSITS



part of 1933 the movements in the two countries are dissimilar and the positions somewhat reversed. In England total deposits did not begin to fall until after the end of 1930, the fall was moderate and short lived, ending early in 1932. In Canada, on the other hand, the decline in total deposits began at the end of 1929, was sharp and lasted till the early part of 1933. In England the ratio of demand to time deposits fell sharply only during the last quarter of 1931 and the first quarter of 1932, while the fall in Canada was heavily downwards from the end of 1929 to the second quarter of 1933. The differences in the monetary and exchange policies pursued in the two countries during this period are too

familiar to require repetition. It may be recalled, however, that although the Canadian government—the Bank of Canada began to function only in March, 1935—took expansionist steps in 1932 and 1934, the improvement in monetary and business conditions did not set in until after the foreign trade balance began to show a decided upturn. The movements of the two series since the low point of the depression have been broadly similar; total deposits showed a steadily rising tendency throughout the period under review, while the ratio



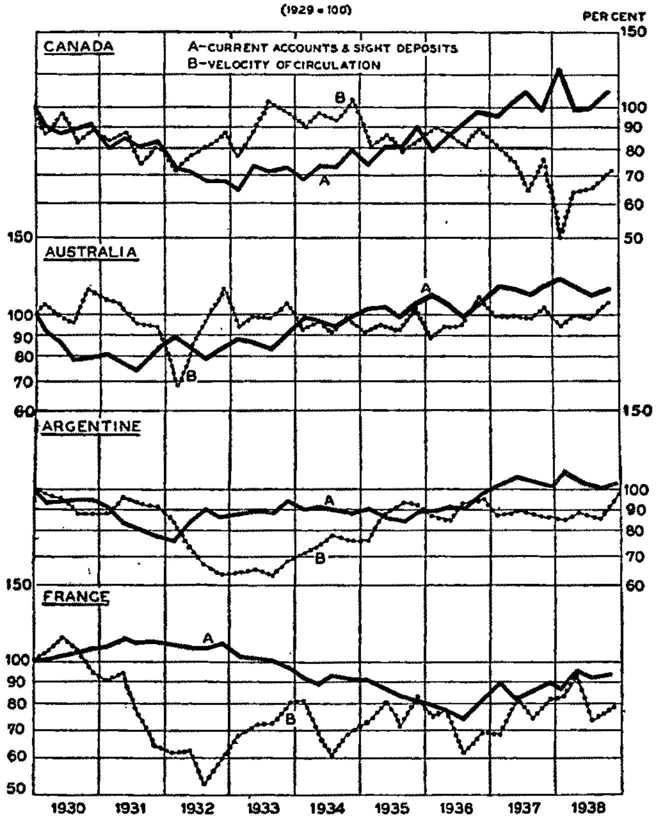
of demand to time deposits displayed a similar tendency until the end of 1936 in England and to the end of the following year in Canada.

Attention may finally be turned to the behavior of demand deposits and to their rate of turnover. Diagrams 6 and 7 show the quarterly movement of these two series since 1929 in eight countries. The rate of turnover or velocity has been calculated by comparing changes in bank clearings (bank debits for Canada) with changes in demand deposits (current accounts and sight deposits in the diagrams). As the purpose of these diagrams is to illustrate broad movements in direction and not precise changes in degree, no attempt need be made

to explain the content or the limitations of the clearing figures or to justify the use of these indices as rough measures of the velocity of deposits.[8]

The noteworthy features disclosed by the two diagrams may be summarized

DIAGRAM 7'
(1929 = 100)



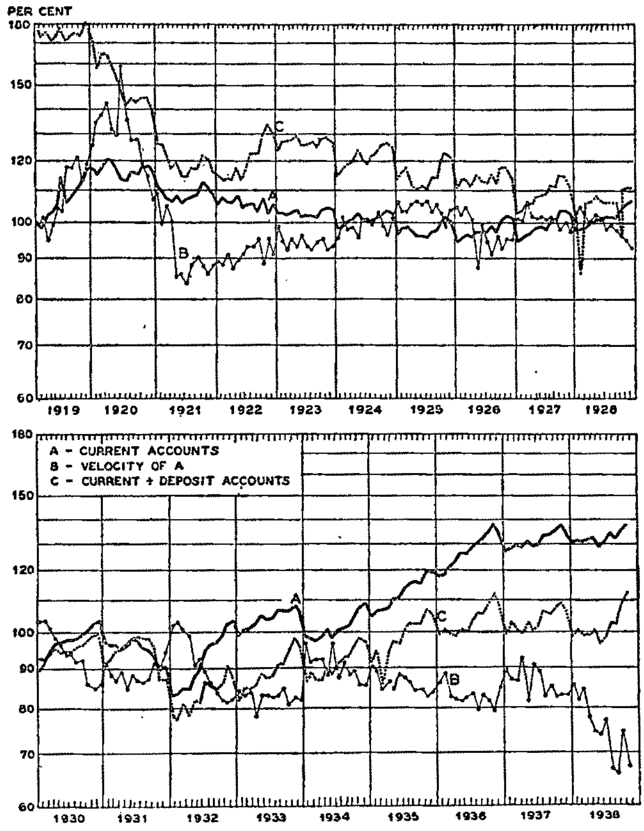
in terms of the phases of the business cycle in the various countries under review.[9] In the depression phase of the cycle the movement of the two series in all the countries considered is broadly similar; the velocity of circulation

[8] See, for example, Keynes, *A Treatise on Money*, Vol. II, Chap. 24; and *Memorandum No. 74* of the Royal Economic Society, *Statistics on Monetary Circulation in England and Wales, 1919-37*. This last source has been used for England for which the sum of Country and Provincial clearings, seasonally adjusted, has been taken. The demand deposits have been adjusted by taking each month of 1929 as 100 for each corresponding month of following years. The clearing figures for other countries are the series published by the League of Nations in *Money and Banking* and the *Monthly Bulletin of Statistics*. For clearings and deposits the monthly average of 1929 = 100.

[9] The course of the business cycle in this context has been judged in terms of various economic series available, e.g., indices of industrial production, the value of foreign trade, the movement of wholesale prices. For reasons of space, no attempt has been made to plot these series or to relate them to those given in Diagrams 6 and 7. It may be recorded, as a matter of historical fact, that for a large number of countries the movement of the monetary series precedes, accompanies, or follows closely on that of the economic series in a fairly striking manner.

of demand deposits fell more than demand deposits. The experience of the eight countries was divergent, however, in the early upward phase of the cycle. In one group of countries (England, Sweden, and Finland), recovery from depression was accompanied first by a rise in the volume of demand deposits, a similar movement in their velocity following later. In another group of countries (Japan, Canada, Australia, and the Argentine), recovery was characterized in the first instance by a rise in the velocity of circulation of deposits.

8 - LONDON CLEARING BANKS
1929 = 100



The increase in the volume of deposits followed soon after in Canada and Australia, but was considerably more moderate than that of their velocity. In Japan the movement of the two series was, in fact, divergent for over a year. In the Argentine velocity rose, but the volume of demand deposits remained practically stationary during the whole of the early phase of recovery. France stands by itself. Such recovery as there was from the lowest point of the depression reached in the middle of 1932 was accompanied by a rise in velocity simultaneous with a decline in the volume of demand deposits.

The movement of the two series becomes even more divergent in the later

stages of the upward phase of the business cycle. In England, Sweden, Finland, and Japan this phase is characterized primarily by a marked and steady increase in the volume of demand deposits. This increase in volume was accompanied in England and Japan by an absolute decline in velocity, while in Sweden and Finland the rate of turnover of deposits tended to remain stationary. In the remaining countries the later stages of the upward phase of the cycle are characterized on the whole by a similarity in direction and degree in the movement of the two series. But even in the case of Canada, Australia, and the Argentine a divergence in the movement of the two series begins to manifest itself as from the beginning of 1937 following on a cessation of the rate of increase in the value of exports and a deterioration in the foreign trade balance.

It remains to inquire whether the two general tendencies which are disclosed by Diagrams 6 and 7 with respect to most of the countries under consideration (namely, the tendency towards a lower level of velocity of circulation of demand deposits and the tendency for an increase in the volume of deposits to be counteracted by a reduction in the efficiency with which they are used, or, in other words, by an accumulation of idle balances and vice versa), are exclusively or largely phenomena of the last decade. It has not been possible to prepare extensive data for a number of countries, but Diagram 8 throws some light on developments in England at least. This shows the relative monthly movement of three relevant series for the decade prior and subsequent to 1929.

The diagram confirms the statement made in connection with the table on page 97 with respect to the postwar declining tendency of the ratio of demand to time deposits (line *C*). The movement of this ratio in an upwardly direction since 1933 does not invalidate that statement; the relatively low rate of interest paid on time deposits since that date was foregone by many in favor of the ability to withdraw deposits without even a short notice, and consequently induced a shift to demand deposits of some of the deposits formerly held on a time account. The two decades stand in contrast as regards the relative movements of the other two series. It will be noted that the volume of demand deposits, after the decline consequent on the liquidation of the postwar inflation, was on the whole relatively stable, and that the recovery from the depression of the early twenties was accompanied exclusively by a rise in the velocity of circulation of these deposits. The recovery from the depression of the early thirties, on the other hand, was characterized by a steady rise in the volume of deposits *pari passu* with a more or less continuous fall in their velocity. The recent characteristics of the two series would most probably remain essentially as disclosed by Diagram 8 even if allowance were made for the transference of idle balances from time to demand deposits.

ROUND TABLE ON PROBLEMS IN THE TEACHING OF ECONOMICS

RAYMOND T. BYE, *Chairman*

Three papers were presented at this round table: "The Teaching of Controversial Questions," by Broadus Mitchell; "Revision of the Elementary Course," by Amy Hewes; and "The Use of Economic Principles in the Teaching of Applied Subjects," by William W. Hewett. Paul M. O'Leary and Maynard Krueger led the formal discussion which was participated in by speakers from the floor. Paul F. Gemmill presided in the absence of the chairman, who was prevented by an injury from being present.

BROADUS MITCHELL[1]: In political economy we evolve our doctrines as our practices evolve, for we learn by living. This is lesson number one in the teaching of political economy: there is no absolute; trends in thought follow trends in performance. Accordingly, economics, in its historical sweep, is grandly inductive. And since practice is constantly changing, it is the ever present duty of the teacher of economic principles to interpret each new adventure that evolves. He must not only explain the event but he must decide which experiments are evanescent and which are destined to remake the prevailing rules.

Now when a controversial question comes to the fore, the teacher of political economy is frequently enjoined to treat it as though it were isolated in time, a thing to be decided on its separate merits. He is asked to "give both sides" and "to preserve an objective attitude." There doubtlessly are economic asteroids, as it were, floating about the universe, magnetically unjoined to any larger mass. But matters of larger moment are not so individualistic and disconnected. Such matters fit into a pattern in the mind of the well-informed teacher. They belong to a sequence which he thinks he discerns and have their places in a generalization. Thus, it is a shallow and immature perception that regards, say, relief legislation or antitrust acts as objects of scrutiny for their own sakes. Any teacher who is likely to be instructive to his students must observe certain tendencies and try to project those trends. Of course, he will value details, explore doubts, and beg refutations. But more than that, honesty will compel him to interpret the issue at hand, to assign causes and seek consequences, according to the rhythm of the theme of evolution that he has in his head.

The notion that the teacher may be neutral is obviously absurd. Is the blind to lead the blind? The simplest fact, so called, can scarcely be conveyed without indicating the impulse behind it and the force which follows from it. Insistence that the teacher should never indoctrinate has gained acceptance from the emphasis laid upon the quantitative method in economics. The ambition to make of economics an exact science prompts the exclusion of opinion. Qualitative judgments are to be eschewed while the symbols of the formula and the graph are accepted as servants of truth.

I am inclined to believe that political economy is more an art than a science, that design for the future may be joined to derivation from the past. Economic

[1] In the absence of Professor Mitchell, his paper was read by Meno Lovenstein.

determinism means that prior conduct has a bearing upon subsequent development, but does not forget that what we do now helps to shape the compulsions under which we shall some day rest. The wish need not be impotent in economic affairs. Exhortation and moral force may be as powerful as economic events. Consider how one field after another, supposed to exemplify the action and interaction of almost mechanical impulses, has been invaded by extra-economic designs, so that the automatic has given way to the induced result. Foreign exchange, for example, sometimes pictured as an area in which insensate economic electrons collided, has been disarranged, even destroyed, by the passions of peoples. It is therefore of utmost importance to note, when trying to discern the economic future, what stands in the foreground of the present. For at a particular time, the enduring of hunger for the sake of a shibboleth may seem more desirable than full bellies.

Premising, then, the belief that economics is as much an art as a science, it becomes obvious that we must prepare practitioners. They will all use the same materials but the pictures they will paint with them will be as different from each other as streaks of yellow ochre are from a painting of sunlight.

Some say that we should not surrender to apparent imponderables by contenting ourselves with qualitative judgments about them, but should organize a statistical attack. But the teacher cannot be a cipher in his own equations. He knows that what often pass for objective, economic forces are truly the expressions of individual or, oftener, group interests. It is usually the cry of a vested interest or of someone who has never heard the teacher in his classroom that forces the theses of teachers of political economy, fraught, as they often are, with important social implications, into the category of imponderables.

We can turn out plenty of teachers well enough acquainted with economic literature and able to give an orderly account to classes. But they are sterile, and wake nothing in their students, unless they see beneficial drifts in society and do what they can, in the classroom and out of it, to help these forward.

AMY HEWES: There are four major criticisms which have been leveled against the introductory economics courses found in American colleges today: first, that they have no clear objective; second, that they lack any semblance of unity, having become mere hodgepodges of unrelated subjects; third, that they are already so overcrowded that adequate treatment of the content is impossible; fourth, that the college students admitted to them are without the necessary background, an objection made very emphatic in the case of freshmen.

As for the lack of clear objective, it must be said of the introductory course that two goals are generally acknowledged: to prepare students for specialized branches of the subject, and to make comprehensible to the student the working of the major economic institutions, the manner in which they came into being, and the methods by which they may be controlled. The requirements for bringing about the latter, and more important, of these goals are seldom met. They rest upon a program which takes frankly into account the changing character of the processes which are its subject matter and the fact that different students will quite certainly get to work most effectively in quite different ways.

Textbooks, while they are valuable as ready reference, cannot be relied upon

to point out these ways to the teacher. For the most part they leave the impression that with the passing of free competition there is no body of theory to offer, that immediate problems only need engage our attention, and that we must start pretty well from scratch in working them out. This deprives the beginner of learning something of great value in discovering why doctrines were discarded. But even the excellent text should not take the place of constant planning of the course to keep objectives clear. Being the most important course offered, the introductory course should always be given by experienced teachers in small sections with abundant opportunity for the student to discuss the new material, relate it to his own experience, and express his reactions in two or three carefully prepared papers on which a conference is given him.

The objection that the course lacks unity must be examined in relation to the whole state of economic thinking today. Certainly it is far more important to perceive at this time that change is taking place than to evolve a formula. Human relations are now seen not to have the permanence attributed to them by the classicists and it is dangerous to assume "normal equilibrium" for the sake of the desired unity. As persons living in a changing system, as well as economists, it behooves us to do all we can to discover the nature of that change and the possibilities of conserving a measure of freedom and increased security under new conditions. To the extent to which the determination of price levels turns out to be a key to control, all that the past and present contribute to an understanding of them deserves a place in the introductory course, with no limits upon diagrams, schedules, and actual, not hypothetical, statistical data. Physiological and psychological factors in economic life must also be considered. It is no longer possible to make the subject the study of a static system and old unities must be sacrificed in order that new unities may be learned.

There is a wide consensus as to the validity of the criticism which maintains that the beginning course is overcrowded. One remedy would be to eliminate all statements of theory—at least all history of economic thought—and offer them in a separate course also required for those students who wish to specialize. But the introductory course must give the student some idea of the boundaries of the whole subject, must give some catalogue of content as well as some elementary acquaintance with the tools to be used in studying it, including economic history, statistical method, and accounting. Yet, because a full treatment is impossible, it would be best to select some one central problem in such a field as agriculture, or even public finance, and let it stand for the whole field. The student who knows some section, no matter how small, of a field thoroughly has gained more competence and is more likely to continue a scholarly program than the student who has scrambled over the whole territory. But care must be taken in cutting down the content of the course to indicate clearly that there are fields of inquiry which the student has not investigated.

In the criticism that the student has not the qualification necessary for the subject may lie the reason why things are not as they should be. For the greater part, students in the introductory course are still economic dependents and have not been required to fit themselves into the discipline of a factory or office. It is therefore not surprising to find that they lack familiarity with a variety of

economic relationships and manifest little curiosity as to how and why the economic system works as it does.

Ways must be devised to make the work-a-day world realistic to the student observer who does not have the feel for the material he studies. Visits to factories, power plants, and stock markets prove valuable in this respect. Constant use should be made of the daily newspaper and of the excellent moving pictures now available. Debates over matters of current popular concern teach the student how to make use of basic materials and familiarize him with a variety of points of view and persons hitherto unknown to him. And a study of some basic industry, such as steel, permits abundant illustration of the trends in corporate enterprise, price phenomena, foreign sales, and industrial relations, all in terms of material high in public attention at the time.

The objective of the introductory course may be high and wide but it may be clearly seen in the effort to understand economic institutions in their interaction and their effects upon the behavior of men, with a view to learning the controls which will make for more satisfactory living—for a bigger and better product and a more even distribution of that product.

WILLIAM W. HEWETT:[2] I agree with those writers who maintain that economic theory should be a unifying agent that specialists in the fields located on the periphery of economics could ignore only at the risk of placing their reputations as specialists in peril. The general body of economic theory, or economic principles, should supply necessary analytical tools for special fields of inquiry. Its subject matter should include such subjects as insurance and marketing, treated not as business techniques but as integral parts of the economic process. And the teaching of courses in applied economics in American colleges should not be so dominated by the growth of business education that the connection between economic theory and the problems usually discussed in association with these subjects atrophies.

We generally require a course in principles of economics as a prerequisite to such courses as public finance, labor problems, transportation, public utilities, etc. Actually, after completing his first course in principles the student never comes in contact with this field of inquiry up to the day he graduates, except, perhaps, for some occasional senior work in economic theory and the history of economic thought in the graduate school. This is so because the customary courses in applied economics have lost contact with one of their primary objectives—the application of economic principles; and have gradually become adjuncts of commerce rather than of the social science of economics. This point is well illustrated by public finance and labor problems, to cite only two cases of this situation.

Public finance has evolved from an integral division of political economy in Adam Smith and John Stuart Mill into a modern study that makes little mention of economic theory. This is most lamentable when we consider the fact that there is no field of inquiry in which economic theory has more to contribute than in the manifold aspects of raising and expending public revenues. Yet the specialist fills his volume with extensive details of tax administration, the classification of tax systems, constitutional limitations, budgetary procedure, and the like. He makes little mention of such splendid problems as:

[2] To be published in full in the June issue of the *American Economic Review*.

the effect of special taxes, especially highly progressive taxes, upon capital accumulation; the consequences of public borrowing in competition with private borrowing upon the economy as a whole; the different effects of different specific taxes and forms of public borrowing upon the distribution of wealth and the direction of production; and so on.

A second field that has sadly neglected the use of economic principles as tools of analysis is that of labor problems. Many teachers even believe that a course in labor problems can be given at any point in the curriculum. But any course that faces squarely the basic issues of labor problems must be built upon a firm foundation of economic theory. A study of the general problem of unemployment, for example, must begin with a firm grasp of Say's law in its present-day dress. And no course in labor problems has earned a right to be listed as an offering in economics that discusses the wage and hour law without tracing its consequences in terms of the best wage and general distribution theory. It must ask, among other questions: Can such a law raise the general wage level? The study of the struggle between the A. F. of L. and the C.I.O. introduces the problem of the elimination of skills with the progress of technology. What does this mean in terms of noncompeting groups, wage structure, the distribution of the national dividend? But do our texts deal with these vital issues? No, they present instead chapter after chapter of descriptive materials on the classification of trade unions, history of the labor movement, structural aspects of unionism, and the like.

What has been said of public finance and labor problems is also true of government and business, marketing, transportation, etc. Is the failure of economic theory to unify the applied fields an inevitable result of the limitations of that body of theory, or is the answer found in the surrender of the specialist to the popular clamor for, and growth of, schools of business and commerce? Why not strike out on a new road along which the kit of tools known as economic theory will be utilized in the study of the operation of the economy as a whole? The task of professional economists is not completed until the mass of material they acquire about economic life, institutions, and techniques has been analyzed by the direct application of economic principles.

PAUL M. O'LEARY: Obviously we cannot avoid dealing with controversial issues in teaching economics at the beginning level or any other level. Certainly we should try to show our students the relativity of economic doctrines and principles to the changing social circumstances surrounding their formation. Above all things we should make it clear to our students that there is extant no body of economic laws or principles which in any final sense justifies or validates any particular kind of social order against other conceivable kinds. And we must never forget that freeing the minds of students from economic superstition, from blind bowing before totem poles of thought, and from being tyrannized by a jargon of economic "laws," is in itself a stupendous task, the partial accomplishment of which is a real achievement for any teacher of any course in economics.

I agree with Professor Hewett that the numerous advanced courses given in departments of economics should be unified around some central organon of thought to which the student should be introduced early in his career.

Undergraduate courses in money and banking, labor problems, public finance, etc., should not aim to produce specialists but rather to develop in the student some degree of sophistication about the world in which he lives. But what is this organon of thought to which Professor Hewett would introduce beginning students and around which he would center specialized courses? Professor Hewett is not very specific upon this matter. I am skeptical about the possibility of equipping beginning students with an apparatus of thought that will enable them to solve the problems that Professor Hewett raises under the heading of public finance. But I do agree that it is better to devote our efforts to making students see what are the important problems and to making them aware of the nature of "special interests" that want the problems answered in particular ways than to load them down with a mass of so-called "facts" and a lot of descriptive detail.

I do not think we should surrender the fort to those of our number who believe that one has done something new and important when one writes an economics text with all value theory omitted, and with no mention of the word equilibrium. This does not mean that we should not be open minded toward so-called "social science survey courses" that make an honest effort to show students what society looks like in its various aspects and something about how it got that way. While they have not usually been so, such courses can be conceived and taught to simplify our task as teachers of economics. It is in our interest to see that they are. After all, we as economists have no particular right to be hoity-toity toward the other social studies. We have shown at best only moderate powers of prediction and control during a period of time when it has been vastly important for such powers to exist. But it must also be said, on the other hand, that what looks like a sad showing on our part is due partly to the presence of charlatans among us who claimed too much power, and partly to the fact that we were asked at a relatively late date to prescribe completely painless remedies for a patient who refused to follow our advice in the past.

We would all do well to follow Professor Hewes in constantly bearing in mind the importance of remembering: what kinds of young people we have to work with, how immature and unsophisticated they are in matters economic, how essential it is for us not to take too much for granted, and how wrong it is for us to pretend to be able to enlighten them more than we really can. We must not let our professional absorption in the subject matter of our discipline lead us to forget the kind of young animals we are supposed to enlighten.

MAYNARD KRUEGER expressed the view that there is too much emphasis on scholarly research in our universities and colleges and not enough on the development of effective teaching. Discussion from the floor covered a wide range of topics. There was general agreement that further sessions devoted to the problems of teaching economics would be desirable, and Professor Gemmill was instructed by an overwhelming vote to convey to the officers of the Association on behalf of this round table the recommendation that such sessions be made a regular feature of our annual programs henceforth.

ROUND TABLE ON PRICE CONTROL UNDER "FAIR TRADE" LEGISLATION

EWALD T. GRETHER, *Chairman*

An abstract or summary is presented herewith of the papers delivered at this round table by: Corwin D. Edwards, "Appraisal of Fair Trade and Unfair Practice Acts"[1]; Harry J. Ostlund, "The Effects of the Fair Trade Laws in the Drug Trade"; and Reinhold P. Wolff, "European Experience with Price Controls."[1]

The state laws permitting resale price maintenance on the part of manufacturers now effective in forty-four states are commonly entitled "fair trade" laws. The round table was planned to include, also, the "market floor" or "minimum price" and price discrimination statutes, but the discussion became centered almost entirely upon the fair trade laws except for a brief discussion of the former by Dr. Edwards.

CORWIN D. EDWARDS: Except for the harassment and abuse which may develop under minimum price laws, there is little reason to believe that, in their present form, they will do much either to harm the consumer or to help the groups which have advocated them. There is danger, however, that when the principle of a minimum price has been well established the level of the price will be raised. These possiblities for the future, and the private perversion of the law at present, constitute the most serious dangers in this type of legislation.

The so-called "nonsigners'" clause is the heart of the fair trade statutes. It permits two private persons, by a private contract between themselves, to control the prices which are to be charged for the same commodity by everyone in the state. The theory upon which such grants of power have been successfully defended in the courts is that the fixed price is necessary to protect the good will attached to the brand or trade-mark and that the public interest will be safeguarded by competition between this brand and others. This whole view of the matter has been an elaborate fiction. Not manufacturers, but retailers, particularly in the drug trade, have been the promoters of the resale contract laws and of the contracts under them.

The effect of this system of control upon retail prices, as distinguished from markups, has been a matter of sharp dispute. Opponents of the laws have foretold large increases in retail prices. Advocates of the laws have prophesied at least two different and conflicting results. At times they contend that the higher prices of goods formerly sold on a cutthroat basis are more than offset by the reduced prices of other goods upon which retailers are willing to bring prices down toward the contract minima. There is a pleasant drollery in this effort to convince the public that organized retail groups are willing to fight for devices to reduce their own operating margins. Moreover, it is clear that the drive to secure contract protection of the entire list price is designed to terminate any such source of price productions. At other

[1] These papers are to appear in completed form in the *Journal of Marketing*.

times the intention to raise distributors' margins is admitted, but the increase is attributed to a reduction of manufacturers' wholesale prices rather than to an increase in retail prices.

As in any widespread price adjustment, one can find instances of any pattern he is looking for. Obviously some retailers who formerly quoted manufacturers' list prices on certain items they seldom sold because of price competition are now willing to reduce the prices of such items in order to announce that nobody can now sell cheaper. In general such reductions have come in the smaller outlying stores. Obviously, too, the mass outlets which set the pace in price cutting and the distributors who found it necessary to meet these low prices are forced to raise prices upon the items they formerly cut. Early in 1938 the average increase on price-maintained drug items in Macy's was between 15 and 16 per cent. Obviously some manufacturers who regard their products as vulnerable to substitutes and who have profit margins which will support a price cut will seek to protect their sales by avoiding any considerable rise in the resale price, either by establishing a low contract markup or by lowering the wholesale price. Other manufacturers, more confident of the consumer's good will and less willing or able to reduce their own margins, will raise retail margins and prices together. Similarly, the process of making contracts involves the jockeying of wholesalers and retailers against each other, to determine whether the margin of either shall increase at the other's expense.

The full effect upon retail prices probably has not yet been felt. The chief concern of organized retailers has been to get all manufacturers to issue contracts, and demands which might frighten some manufacturers away have often been officially discouraged. The journals of the drug industry have reiterated the statement that prices must not be pushed up too fast and that retailers must have patience with manufacturers who intend to make a series of small price increases rather than one large one. The eventual effect of the program upon retail prices must depend upon such questions as the degree to which private brands are substituted for manufacturers' brands, the efficiency with which systems for discovering and suing violators of the contracts can be worked out, the extent to which manufacturers are willing to reduce their own profit margins in order to keep retail prices low, and the degree to which retail costs are raised by a shift of sales emphasis from price to other forms of appeal.

The direct effect of resale price contracts upon the level of retail prices is probably not the most significant aspect of these contracts. The contracts necessarily destroy the opportunity for leadership by any distributor in reducing prices and operating margins. Ostensibly striking at loss-leader selling tactics by mass distributors, they are ill-adapted to check such tactics; for mass distributors can readily develop private brands as leaders. The contracts are well adapted, however, to prevent the general price policy of a distributor from reflecting his relative efficiency and to prevent competitive pressure from pushing distributors toward greater efficiency and lower operating margins.

It appears probable that resale price contracts can be adapted to only a minority of our total retail sales. In some industries products are not identified by trade-mark or brand. In others, an effort to maintain prices would lead to

buying on specification, the victory of distributors' private brands, direct sale from manufacturer to user, or some other means of escaping the contracts.

Both the minimum price laws and the resale contract laws express the resistance of established distributors to change. Economists have often pointed out that progress in distribution has not kept pace with manufacturing, and that costs of distribution should come down. New types of distributive enterprise which offer promise of such a development are the targets of this restrictive legislation. Thus these laws are the distributional prototypes of the earlier statutes by which a handicraft society sought to limit or prevent the growth of modern manufacture. Public bodies have no doubt been more receptive to such legislation because some of the new distributional forms are large enterprises, which, it is thought, may become monopolistic. A vigorous antitrust policy could have dealt with the danger of monopoly, and still can; whereas the resale price statutes themselves create new chances for collusive restraint of trade.

HARRY J. OSTLUND: A portion of Professor Ostlund's remarks was devoted to a description of the survey being conducted under his supervision for the National Association of Retail Druggists. His conclusions concerning the effects of the fair trade laws in the drug trade were as follows:

In spite of the fact that there are no quantitative data as yet available, there are still a few observations which appear to date to be entirely justified: (1) The immediate effect of retail price maintenance appears to be a reduction of the spread between the highest and the lowest prices. But the range of prices between the highest and lowest that now prevail is apparently still greater than the range in costs as between the highest- and lowest-cost distributors. (2) It appears definitely that the so-called "minimum" prices have not become the maximum taking the industry as a whole. (3) Competition as between manufacturers appears very definitely to have been greatly intensified as a result of price stabilization policies. (4) Manufacturers, by virtue of retail price maintenance, have been to a certain extent put in a position where they are forced to take some of the brunt of the retail competitive price situation. (5) If a manufacturer finds it necessary to reduce the minimum price at which he wants his goods sold, or to reduce in any measure the gross margin allowable to his distributors, he is still in a position where he can control such an adjustment so that the relatively narrower margins allowed to his distributors will still be to a measure protected, thus resulting in retaining his market and retaining at least a degree of good will on the part of his distributors. (6) There is no indication that loss leaders will be done away with in the retail drug trade any more than in any other, but it does seem evident that from now on no manufacturer, unless he wishes to, will have to have his product used as a loss leader. (7) There is no direct evidence to the effect that all manufacturers in the drug or any other industry will find it expedient to attempt to control the retail price of their commodities. (8) There is no indication that resale price maintenance on the part of manufacturers is any particular boon to the genuinely inefficient small retailers. (9) Finally, we would like to point out that up to the present time the most that students of the drug in-

dustry or any other industry can know about the effects of fair trade laws is the immediate effects. It will take a good many years before it will be possible to know what the basic effects really are.

REINHOLD P. WOLFF: Foreign experience with price maintenance cautions against overrating the issue. Fixed retail prices in Europe have neither raised general price levels nor to any considerable extent created price uniformity. The policy has not checked the growth of large-scale retailing; nor has it contributed much to spread of government intervention. It has only remotely contributed to the growth of fascist ideas in Central Europe. Equal sociological conditions are likely to produce economic problems in equal settings. Despite the discrepancy that exists here and abroad in economic thought, government attitude, and legal setup, the problems of resale price maintenance are strikingly similar all over the world. They reflect identical social forces that generated the policy and produced similar economic effects. Similar to the United States, resale price maintenance in the three chief industrial countries of Europe, namely, Great Britain, Germany, and France, is an outgrowth of large-scale distribution on the one hand and of the triumphant progress of the packaged article on the other hand.

Fundamental differences in government and law have not affected the essence of the problem. Almost simultaneously Germany and its legal satellites on the one hand and the Roman Code civil countries on the other hand adopted the doctrine that acquisition of protected articles from contract breaking dealers for the purpose of selling them as loss leaders constituted unfair competition. In Great Britain the courts have not gone to the continental extreme of declaring price cutting illegal. Practically a similar result was obtained, however, by tolerating trade boycotts against price cutters. In form, too, the worldwide similarity is striking. Like in the United States, in Europe the associative setup has proved superior to the individualistic device. The bulk of retail price control stems from organized efforts. As on this continent, the strength of the price protection device is in direct relationship to the power of retailer groups. The highly efficient systems of price maintenance are found in the specialized trades as in book, drug, and liquor selling where retailer associations are powerful. Products which flow into diversified channels, as for instance foods, resist price controlling efforts as they do here, because of the incoherency of trade groups.

Again it is remarkable to observe the relatively small influence of legal forms on the efficiency of an established price control system. For three decades price fixing cartels and cartel-like organizations have been clearly legal in two of the major industrial countries of Europe—Great Britain and Germany. They were practically tolerated in France and Austria. Despite these differences in legal technicality existing between the New World and the Old World, the operation of price maintenance is similar in all of the industrial countries not excluding the United States. If any, there is a difference in emphasis. In Germany, where manufacturing industry is powerful, the organization of price maintenance was fostered and controlled by leading manufacturing enterprises. France, typical middle-class country with a politically powerful retail trade

body, saw the retailers in the driver's seat of the price maintenance vehicle. The British attempts hold somewhat a middle position between these two trends. Here we see the dealer groups in control of fair trade plans. The final result is hardly different in any of the mentioned countries. We find a few potent enterprises in each branch of distribution in price control of their most outstanding trade-marked products. The effects appear to be trade-wise rather than state-wise. The legal setup and the public policy towards price fixing are the lesser influence as compared to those emanating from business conditions.

Experience abroad also points to the organizatory limitations of the policy and to its effects on competition. It discourages the belief that price maintenance if fully legalized would produce a general elimination of price competition in the distributed trades.

The focal point of attack in the United States against price maintenance systems is their alleged influence on prices and margins. This most controversial question receives little light from foreign experience. Since price maintenance systems abroad have operated for many decades, we are unable to draw "before and after" price comparisons of a similar nature as have been so widely used in the United States to prove the increase in prices provoked by the fair trade acts—or to prove the contrary. A distinct trend towards price rigidity exists where European price maintenance systems are coupled with cartels of producers. The history of not a few price maintenance organizations furnishes evidence for a tendency to use price controls in the distributive step for stabilizing prices at the manufacturing end. Frequently manufacturers made their co-operation in resale price control dependent on dealers' co-operation with producers' cartels.

Nor can it be said that European price controls have tipped the scales in favor of the small independent retailer. Despite retail price supervision, large-scale distribution has developed in Europe in about the same dimensions as it grew in the United States. The co-operative movement, which is strong both in Great Britain and in Germany, found itself engaged in a permanent struggle with price control interests of the independent retailers. Yet there are very few instances where resale price attempts definitly resulted in a prevention of consumer co-operatives.

More positive has been the social and the political implications of resale price maintenance and it is perhaps here that we have to look for the storm center of price controls. Our retail price maintenance laws have furnished retail trade associations with an effective propaganda weapon. Similarly in Europe many smaller businessmen assembled around the price protection banner. Once organized the retail trade developed social and political strength. It now asked for further and more intensive protection of its interests. In this respect retail groups on the Continent were more successful than our fair trade movement. Prohibition of the five and ten cent stores, checks on the horizontal and vertical growth of department stores, and many other protective measures have been enacted for the protection of the small independent retailers in Europe. Many of the trade regulation laws that have swamped the Continent are at least partially due to the influence of retail organizations, which in turn owe their existence to the price maintenance movement. The large extent of these

European laws shows the real dangers of price controls. It is the contagious infection with the guild spirit that appears to present the most serious problems to a competitive retail structure.

Surprisingly for American observers, the governments of European countries have done little to prevent resale price systems, or to stem their abuses. Resale price maintenance has been a controversial issue in Europe, as in the United States. Public attention has been centered on it for the last fifteen years, yet public reactions were extremely mild. By and large, the authorities took the attitude that price fixing was more or less a matter of those engaged in selling and buying and of little concern to the community. The courts upheld price fixing unless it was proven that the consumer had been exploited by extortionary prices. Except in very few cases of minor importance, no resale price maintenance system has ever been voided for this reason. It was not until the depression of 1930 that European governments became seriously concerned with vertical price controls. By this time we saw in all three countries, Great Britain, Germany, and France, parliamentary bodies at work on our problem. The French attempts led nowhere. A thorough investigation of the Reichswirtschaftsrat in Germany centered on the possibility of lowering prices of branded articles. Instead of proposing the legal elimination of price restrictions, it inspired a law that demanded a 10 per cent price reduction of price-protected items. The investigation was obviously initiated with the purpose of coordinating the sluggish price levels of branded goods to the sunken wage levels of the depression. But it eventually did not condemn the policy of maintaining prices as such. Similarly favorable was the result of the British investigation of 1931. It ended with the issue of a bill of health to the price-maintaining bodies.

NATHAN ISAACS led the discussion, but did not submit a summary of his comments. Several members of the audience also made informal remarks.

ROUND TABLE ON PROBLEMS OF AMERICAN COMMERCIAL POLICY

PERCY W. BIDWELL, *Chairman*

The following papers were presented at this round table: "The Conflict of American Foreign Trade Policy with Totalitarian Policies," by Frank A. Southard, Jr.; "The Relation of American Foreign Trade Policy to New Deal Domestic Policy," by Harry D. Gideonse; and "The European War and the Import Trade of the United States," by E. Dana Durand. Following the papers, Calvin B. Hoover, Ernest K. Lindley, and Charles R. Whittlesey participated in the discussion of the topics presented.

The Chairman remarked that two types of conflict had emerged in American commercial policy: the conflict between our foreign trade policy and certain of the objectives in New Deal domestic policy, and the conflict of our foreign policy with the foreign policies of the so-called "totalitarian" states. The situation might be compared to two groups of boys playing baseball. One group insists upon maintaining the traditional rules of the game, but the other team has discovered and is playing according to a new set of rules. Can these two teams play ball together? Should the group adhering to the traditional rules (the policy of most-favored-nation treatment) be able to insist that the innovators (in this case the totalitarian states) give up their newfangled ideas and readopt the old rules, or should the traditionalists adopt the new rules, or can some form of compromise be devised?

PROFESSOR SOUTHARD's paper dealt with the second type of conflict. Taking Germany as the typical totalitarian state, he found the essential elements of German trade policy to be:

1. Rigid control of the balance of payments, involving (a) a monopoly of foreign exchange, (b) a pegged official rate, (c) various depreciated rates where essential to promote the export of German goods, (d) bilateral balancing (through blocked marks, exchange clearing, and barter) wherever it promises to provide the leverage to promote exports and to aid essential imports.
2. Discrimination between countries through tariff, quota, and exchange rate preferences partially because it makes an expedient contribution to balance of payments control (as above), and partially to serve in building politico-economic groups of countries within the German orbit.

American trade policy by contrast was found to be based upon the principle of equal treatment and the maintenance of free markets for foreign exchange. Notwithstanding these contrasts, German and American trade policies have certain points of resemblance. Both now make use of tariffs and quotas and both, in the past, have used currency devaluation. Both promote exports by the use of subsidies and by various types of credits.

A statistical study of changes in German export trade between the years 1929 and 1937 showed that German gains were most notable in nonindustrial countries, principally in Southeastern Europe and South America, but these gains were to a large extent offset by losses in the markets of industrial countries. Thus the new German trade policy caused a reorientation of German

export trade, a change which was facilitated by depressed conditions in the markets for primary products. The German export drive, when measured by quantum of exports, does not appear to have been particularly successful. German export prices were higher between 1929 and 1938, relative to world prices, than either English, American, or Italian prices. This handicap explains to some extent the German use of multiple currencies, clearing agreements, and other devices for trade expansion. The German policy, Professor Southard concludes, was one of opportunism: "Germany was forced into her present commercial policy by her own domestic price policy and by the exchange depreciation of her principal competitors."

The policy of the United States was found to be in conflict with German policy "only in the sense that the two policies differ at many points and that the two countries, armed with these policies, are competing in common markets."

It is shown that the trade policy of Germany has not been more successful than that of the United States. It has not succeeded in driving American exports out of foreign markets, nor has it prevented the United States from finding countries willing to support a non-discriminatory trade policy. Trade agreements have already been made with twenty countries, accounting for about 60 per cent of our foreign trade. "To this list many other countries—including virtually every country in Latin America—may be added whenever we are willing to make the necessary commercial and financial concessions."

How can the United States most effectively meet the competition of Germany and other totalitarian states? The answer to this question Professor Southard found in the progressive reduction of American tariffs on imports. Between totalitarian trade policy and the trade policy of the United States, the conflict is intolerable only if our policy does not continue to serve the ends for which it was designed; namely, the stimulation of non-discriminatory foreign trade. On the other hand:

> If we are on the eve of an acceleration of protectionist sentiment in this country it seems rather useless to consider what trade policy is best calculated to meet totalitarian competition. Facing this prospect, there is no economic justification for the use of export credits, gold loans, or long-term investments as a means of increasing the export of American goods.

Russian and Italian trade policy, Professor Southard found less characterized by expediency than the German. In these countries, particularly in Russia, state-owned export or import monopolies control foreign trade, fitting it into the national economic plan. Under the stress of national need, the totalitarian state may export at prices which do not cover cost of production. The trade policy of the United States, on the other hand, is based on the assumption that, normally, exports will yield a profit. Consequently, if American exports have to face cost-disregarding totalitarian competition, there may indeed be an insoluble conflict between the two sorts of trade policies.

> But even if this sort of totalitarian export competition should become increasingly important there is very little the United States can do to meet it except to offer to foreign countries dependable, large-scale outlets for their goods in the United States market. . . . The only royal road to a successful international commercial policy is market "reciprocity."

A summary of PRESIDENT GIDEONSE'S[1] paper follows: The economic objective of our foreign trade policy he finds in a desire to broaden trade by the negotiation of trade agreements. Its political objective is "the development of an atmosphere in international relations in which peaceful intercourse between nations becomes somewhat more probable or possible." New Deal domestic policies were characterized as "piecemeal protection of a succession of producers' interests."

The agricultural controls are administered to protect the farmer. The wages-and-hours administration is supposed to raise wages. The Wagner Act machinery is charged with the protection of collective bargaining. Even the ICC has degenerated into an agency to protect railroad labor and railroad bondholders. In other words, the special-interest principle of the protective tariff has been generalized. In so far as consumers' interests are envisaged at all, they come in indirectly through the supposed reverberations of the protected producers.

With this domestic policy our foreign trade policy contrasts sharply; ". . . . the present trade agreements program submits every special interest plea to the test of its compatibility with a general interest of the economy as a whole."

The speaker laid emphasis upon the trade agreements policy as a safeguard of the flexibility and even the viability of our free economic institutions. Through foreign trade our economy is kept in constant contact with the world market and thus the rational functioning of economic calculations is promoted. Because of potential competition, relatively low foreign trade figures in a free market may be greatly significant to the health of the economic structure, and, conversely, relatively high foreign trade figures, based on the bargaining policies of totalitarian states, may conceal a fundamental decay of world markets.

In attempting to explain the irrational character of economic policy in foreign countries as well as in the United States, President Gideonse called attention to the new drift in social policy. The social framework cannot any longer be regarded as a constant. Consequently, social and economic theory based on this assumption has lost its relevance.

Modern concentration on a higher standard of living implies emphasis upon specialization and the division of labor. It means heavy stress upon rational and impersonal factors and continuous undermining of the traditional, the social, and the other-than-intellectual. The community reaches a state of "anomie" in which the old code has lost its grip on individuals without a new code emerging. The result is a search for new factors of social cohesion. In older communities such cohesion was provided by the church and by the family. Nowadays a solution is sought in new trends in domestic or foreign economic policy.

The disintegration of world economy is an obvious fact, only partly obscured by some of the immediate military necessities of countries striving for autarchy. The splintering of domestic markets into monopolistic segments is equally obvious, and the threatening political implications of the destruction of both world and domestic markets are already headline material in the daily press.

New conditions demand a new attitude on the part of economists. The reconstruction policy of the New Deal is only a stopgap which does not deal with

[1] To be published in full in the March issue of the *American Economic Review.*

basic causes. The restoration of free markets, also, although it would reduce immediate economic pressures, will in the end strengthen forces of social disintegration. What is needed is a return to the old art of political economy such as was practiced by Hume, Smith, and Mill. The economists should not abandon their science to journalists while busying themselves with the study of specialized branches, such as money, agriculture, labor, or monopoly. President Gideonse insisted that his paper should not be interpreted as an argument for laissez faire or an argument against planning in the broad sense of applying intelligence to social problems, but he objected to the present drift of planning, both private and public, on the ground that they were concerned with surface symptoms. In this respect he found that the planning involved in foreign trade policy—planning to restore competitive controls—was similar to that involved in the domestic policies designed to create contrived scarcities.

E. D. DURAND's paper dealt with "The European War and the Import Trade of the United States." The first World War resulted in a quantitative decrease in American imports, and sharp changes in the commodity composition of the trade. There was a marked decline (in terms of value) in the percentage of total imports furnished by Europe, and a corresponding decline in the imports of the finished manufactured goods which are the typical products of that region. The shift from indirect to direct trade in such commodities as wool, tin, and rubber was also responsible for the decline in imports from Europe.

The new pattern of American import trade differs materially from that of 1914-18, and consequently conclusions from the World War experience must be drawn with caution. Europe has never regained its position as the dominant supplier of United States imports (in the two years, 1937 and 1938, it supplied only 28 per cent). Consequently, the interruption of imports from Europe would now be of less significance than it was twenty-five years ago. Imports from Germany and the former Austro-Hungarian territories have suffered a drastic decline and the Allied Powers have also fallen in the ranks of suppliers of the American market. This change results partly from the increasing direct importation of non-European goods, and also from the rise of Japan as a manufacturing country. To a considerable extent, furthermore, manufactured goods imported from Europe before 1914 are now supplied by American factories.

In the present war, Germany and the territories it holds in Central Europe will presumably be shut off completely from trading with the United States, but without materially affecting the American economy. The exporting ability of the Allied Powers will be reduced, but their incentive to export may be stronger. Not being permitted to borrow in our market, England and France will strive harder than in 1914-18 to ship goods to pay for commodities imported from us. In particular they will probably make strenuous efforts to maintain their large and profitable export of alcoholic liquors.

Wood pulp and newsprint paper, taken together, now rank first among our imports from Europe. The United States is dependent on imports, in the form of pulpwood, wood pulp, and paper (principally newsprint) for almost exactly half of its huge total requirements of paper. Three eighths of these imports during recent years have come from the Baltic countries, with Sweden ranking first and Finland second. . . . .

. . . . If imports of pulp and paper from Europe should be greatly reduced by war conditions, they could probably be replaced fairly well, partly perhaps by increased imports from Canada but more particularly by increased production in the United States itself. A serious problem would however arise for many of the so-called "nonintegrated" paper mills which have relied wholly or chiefly on European pulp for their material during recent years. The bulk of the production of pulp, both in Canada and in this country, is not made for sale but for conversion into paper in the same plants, and it is uncertain how far integrated pulp-paper mills would be able, or willing, to expand their sales of pulp to nonintegrated plants.

Imports from non-European countries may be reduced by shortage of shipping or by increased demands for certain commodities on the part of the belligerents. Should a severe shortage of world shipping develop, it would naturally affect principally our imports of bulky cheap commodities, and especially those drawn from the more distant sources. Increased demands on the part of the Allied countries may seriously affect our supplies of certain imported raw materials.

A number of the most important commodities are largely, if not exclusively, produced in outlying areas of the British and French Empires. Those Empires, particularly the British, are in position to exercise a large measure of control over the distribution to world markets of such basic materials as rubber, tin, clothing wool, chrome ore, nickel, asbestos, graphite, mica, industrial diamonds, long-staple cotton, jute, palm kernels, and cocoa beans—commodities for which this country must depend wholly, or in considerable part, on imports.

Dr. Durand pointed out that British and French interests, with the approval, and sometimes the aid, of their governments, had organized, even before the present war, effective control over some of the commodities named above. Since the war, these controls have been extended. They will doubtless be used to obtain profitable prices during the war period, especially for sales to outside countries.

Presumably, however, they will not be disposed to extort the last penny, since by doing so they might not only reduce unduly the volume of sales but cause ill-feeling in neutral countries, including the United States, which the Allies can ill afford to incur. The Allied governments will presumably look with particular favor on exports from their Empires to the United States, since it is from the United States that they must make huge purchases of war materials.

In commenting on Professor Southard's paper, CALVIN B. HOOVER pointed out that in German policy the objective of foreign trade was to acquire imports. Exports were only a means to this end; thus the German policy was more closely in accord with the thinking of English free-trade economists of the middle of the nineteenth century than is our own policy. We stress exporting as an end in itself, considering imports as a necessary evil.

ERNEST K. LINDLEY disagreed with President Gideonse in his characterization of New Deal domestic policy. He cited a number of new types of control set up since 1933, the SEC, WPA, NLRB, the Social Security Administration, and others, which had as their purpose not the protection of any group of producers but rather the protection of investors, consumers, or the public at large. He questioned also whether the foreign trade policy of the New Deal could be characterized as having exclusively in view national rather than special interests. In all of the trade agreements he found that emphasis was laid upon securing concessions for various American economic groups. In general, Mr. Lindley approved of the Hull program, but contended that its accomplishments had been overrated.

CHARLES R. WHITTLESEY:[2] The existence of totalitarianism has tended to obstruct the trade agreements program in a number of ways. In the first place, we either could not or would not negotiate agreements with the distinctively totalitarian nations. Later, the expansion of Germany deprived certain areas of the right to share, on a most-favored-nation basis, in the fruits of the program and destroyed one of the agreements, that with Czechoslovakia. With the outbreak of war, even France and England have become virtually totalitarian in their trade methods; for the time being, this has made some of the provisions of the agreements more or less meaningless.

Apart from wartime developments, the problems created by totalitarian methods in the field of international commercial policies spring chiefly from the greatly reduced importance of individualistically determined prices. The desirability, emphasized by President Gideonse, of "free contact and comparison with a world market" is less clear when that market is subject to totalitarian controls. To suggest that we should meet the competition of totalitarian states in third countries is to imply that we should join them in disregarding price considerations—in a word, that we should combat totalitarianism by becoming in some degree totalitarian ourselves. It may well be questioned whether foreign trade is worth preserving at such a cost.

While totalitarianism possesses certain tactical advantages in foreign trade, a number of serious disabilities are inherent in it. There is a sacrifice of the economic methods of selecting the fit and eliminating the unfit producers. From the standpoint of the country as a whole, there is a heavy loading of costs because of the burden of administration. Experience has demonstrated that the trading partners may become extremely dissatisfied. These considerations would seem to indicate that, while totalitarian trading methods may lead to serious disturbances, they are subject to fundamental weaknesses. As economists we may be tempted to exaggerate the importance of these underlying economic factors, but it would be folly to ignore them.

Professor Southard's analysis demonstrates that the showing of totalitarian states has not been impressive. Gains in some markets have been balanced by losses in others. While conditions have perhaps not been entirely representative, the evidence this affords is nevertheless highly significant. A dozen years ago there was much discussion of the threat of Russian dumping; now it is Germany. The United States Tariff Commission looked into some of the cases of alleged Russian dumping and found that the allegations were almost completely groundless. More often then not the charge of dumping was advanced in an effort to bolster a weak case for increased protection.

Nothing that any totalitarian state can do to our foreign trade is half so serious as what we can do to it ourselves. The chief threat of totalitarianism to our foreign trade is that it may be used as a bogey to bring about the introduction or extension of economically unsound measures by the United States, and may be employed to emasculate, if not to destroy, our trade agreements program.

[2] Summary submitted by Professor Whittlesey.

THE TRANSPORTATION PROBLEM

THE ADJUSTMENT OF RATES BETWEEN COMPETING FORMS OF TRANSPORTATION

By JOSEPH B. EASTMAN
Chairman, Interstate Commerce Commission

Contrary to ideas rather widely entertained by those who have not studied the history of the Interstate Commerce Commission, the transportation abuses which it was created to abate were the product more of competition than of monopoly, although both were contributing factors. Between them, with competition as the main moving force, they had produced all manner of discriminations in rates which were found on every hand and were thought by many to be unjust. The competition was chiefly between railroads, but even in those days water transportation was an important competitive force and was responsible for the more flagrant instances of charging more for short than for long hauls over the same route which were particularly obnoxious to public opinion.

It is significant that in the second year of its existence the Commission recommended "that the carriers engaged independently in interstate traffic on the rivers, lakes, and other navigable waters of the country be put in respect to the making, publishing, and maintaining rates upon the same footing with interstate carriers by rail." In the same report the Commission dwelt upon the damage done to both the railroads and the public by unreasonably low competitive rates, and five years later, in 1893, after mentioning the many railroad receiverships, it recommended that it be given authority to fix minimum as well as maximum rates. It thus appears that even then the thought had gained ground that regulation directed against unduly low rates, and designed to curb competition in this respect, might well be required in the public interest to protect the carriers against themselves.

The power to prescribe for the railroads minimum in addition to maximum rates was, however, not given to the Commission until 1920, when it was conferred in a statute, the Transportation Act of 1920, whose predominant object was to foster and promote good financial health for the railroads. This endeavor to promote carrier welfare through legislation has since persisted. The five most important transportation statutes of recent years (the Emergency Railroad Transportation Act, 1933, the Intercoastal Shipping Act, 1933, the Motor Carrier Act, 1935, the Merchant Marine Act, 1936, and the Civil Aeronautics Act, 1938) were all acts whose primary purpose was, in one way or another, to improve carrier financial conditions; and the same motive dominates the transportation legislation which Congress now has under consideration. The shipper and

traveler have not been the direct objects of concern in the more recent regulatory acts. The immediate objects of concern have rather been the carriers, with the thought, of course, that their welfare is in the long run essential to the public welfare. Those who are wont to inveigh against public regulation as a force that hampers and hurts the carriers may well give heed to the fact that the carriers themselves have been leading proponents of the more important federal regulatory statutes from 1920 to date.

The reason for this lies in the fear, generated by plenty of practical experience, of the effects of unrestrained competition, a fear which has continually grown more acute as competition in transportation has increased in prevalence and intensity. The outstanding transportation fact of the past two decades, as everybody knows, has been the tremendous growth of such competition. The traffic which is not open to some kind of competition in transportation is now so rare as to be negligible, and one very important fact is that much of this competition, so far as all forms of transportation except the railroads are concerned, can be furnished by the shipper or the traveler with his own facilities.

I sometimes wonder whether it might not be wiser to let nature have her way with this competition and work out results on Darwinian principles. Apart from the carnage and disaster for many which this process would involve, however, such a struggle for existence would not be maintained by intelligent human beings in the absence of compulsion. Left to themselves, sooner or later they would begin to trade and combine. The alternatives to an attempt to abate the abuses of competition by public regulation are, therefore, either to compel competition to be maintained in full force and vigor until only the fittest survive, or to permit the carriers to work out a state of peace in their own way through an admixture of throat cutting, trading, and combination. Neither of these alternatives appeals to me as likely to produce satisfactory results, and therefore I see nothing to do except to continue and improve, if possible, the policy of regulating competition in transportation to which the country is now quite definitely committed.

With respect to this matter, I speak with the limitations of one who has the job to do and cannot properly indulge his own theories without hearing and considering what all interested parties have to say. The Commission now has a number of important cases pending in which the rates of competing forms of transportation are under consideration. They present issues which, in my judgment, are as difficult as any that the Commission has ever had to determine, and there is such a clash of views as to how they should be determined that the controversy is likely to spread to the Supreme Court, to Congress, and to public opinion. I am inclined to believe that sound and satisfactory policies will be developed only

gradually through the decision of successive cases and experience with the practical results, much as the common law was developed. For these reasons I shall not undertake in this paper to give answers to the problems but only to indicate what some of them are.

The competition between different modes of transportation is, of course, affected very materially by the extent to which public aid or subsidy is given, directly or indirectly, to each. Very complicated questions of fact and of public policy are presented by this matter, but they have not been committed to the Commission for determination or consideration, and we must take the situation as it exists in this respect regardless of what it should be. The chief questions by which the Commission is confronted in the adjustment of the rates of competing forms of transportation are whether and how and to what extent it should exercise its authority to prescribe minimum reasonable rates.

What is a minimum reasonable rate? This is a question which the Supreme Court may have to answer. There are widely different views. At one extreme, there are those who say that it is a rate which covers with some margin what is termed the "out-of-pocket expense" of hauling the traffic, by which is meant the expense which is added when the traffic is carried and which is saved when it is not carried. Others say that the measure is what I call the full allocated cost of service, including a fair return on the value of the property used in the service. This covers, not only any expense for which the traffic in question is solely responsible, but also its proportional share of the expense incurred in common for that and other traffic and of the profit essential to the financial welfare of the carrier. At the other extreme, many take the view that no particular formula can be used in determining a minimum reasonable rate. Many things are pertinent and there are flexible limits of judgment, dependent on the circumstances, just as there are in the determination of maximum reasonable rates. Congress, according to this view, must have given the Commission this power for the purpose of preventing destructive competition, of promoting the use of each mode of transportation in the service for which it is economically best fitted and discouraging its use under reverse circumstances, and of stabilizing and improving the financial conditions generally prevailing in the transportation industry. This being so, it is argued, the power should be used in each particular situation in whatever way will best accomplish that purpose.

In the past, cost of service lurked in the background in the fixing of railroad rates, but the railroads used only rule-of-thumb methods in determining such cost and were chiefly interested in it from the standpoint of results in the aggregate. In fixing rates on a particular kind of traffic, they were more interested in what it would bear. More euphemistically, this has come to be known as giving consideration to the value of the service. The

highest rates in relation to the cost of service were, I think, and speaking broadly, the carload rates on commodities capable of fairly heavy loading and of relatively high value. The present widespread competition from other modes of transportation, both public and private, has brought cost of service into the foreground and given it a much greater degree of importance. In adjusting rates between competing forms of transportation, specific knowledge of respective costs of service, so far as it is attainable, seems essential.

I say "seems" in this connection, because there is a school of thought to the effect that when carriers of different types compete, each can contribute something in the way of service that the other cannot supply, so that all ought to be available for public use. Therefore, it is urged, competitive rates ought to be adjusted to a basis which will be profitable to the carriers concerned, of whatever type, and which will permit them all to share in the traffic. In such an adjustment, those who hold this view would give lesser attention to respective costs of service, but in determining the general level of the rates would give heed to the value of the service, and they would also establish what are termed "differentials" in the rates, i.e., fix rates somewhat higher or lower for one type of carrier than for another, wherever necessary to bring about what they regard as a fair distribution of the traffic.

However, the Commission is concentrating attention on the subject of cost finding, and has recruited a small staff of experts for this purpose. It is hardly necessary to say that the subject is full of opportunities for controversy, particularly as to railroad costs, because of the large extent to which costs are incurred in common for the hauling of many different types of traffic. To distribute such items of expense, allocation formulas must be used the accuracy of which is not capable of complete demonstration, and which often appear somewhat arbitrary. So-called "out-of-pocket expense," which also enters into the picture, as I have already indicated, has been found to be a shifting and elusive quantity, dependent on the volume of traffic under consideration.

That the questions which arise out of the desire of carriers to take on competitive traffic, if need be, at rates which yield only a bare margin over what they deem to be the out-of-pocket expense require close and thorough study is, I think, already very evident. From time immemorial the railroads have justified low competitive rates on this theory that the traffic so gained adds comparatively little to the expense which would otherwise be incurred. Trucks and ships find plenty of opportunities for applying the same theory, particularly in securing return loads when traffic preponderates in one direction. No doubt it is a fairly sound theory, if confined to a comparatively small fraction of the traffic carried. The difficulty is that out-of-pocket expense tends to increase disproportionately as this

fraction increases in size, and this tendency becomes a positive danger when competition is so generally pervasive as it is at the present time. It is relevant to call attention to the fact that prevailing railroad passenger fares and less-than-carload freight rates in general, as well as many carload rates which they charge in competition with water carriers, can only be justified by the added-traffic, out-of-pocket expense theory.

It is also evident that in adjusting the rates of competing types of for-hire carriers under modern conditions, consideration must always be given to the ability which the shipper frequently has to provide his own private transportation, by ship, truck, or pipe line, if he finds this to his financial advantage. This is a factor which tends to make cost of service much more nearly a measure of what the traffic will bear than once was true. There is some alleviation from the standpoint of the for-hire carriers, however, in the fact that the shipper seldom has a good load factor; that is to say, the traffic which he can handle himself is apt to be mostly in one direction; and he often shrinks from the investment and the creation of an organization required to carry on what is for him a new line of activity. This is especially true of motor carriage. Ordinarily he prefers, unless the cost disadvantage is quite substantial, to utilize the services of the for-hire carriers.

A further danger that we must be on guard against in fixing minimum rates is the establishment of an artificial and rigid method of rate making which will impair the incentive which free competition gives the carriers to increase the efficiency and economy of their operations. When it is borne in mind that the amount of transportation to be performed is not a fixed and static quantity, but one capable of expansion as facilities with lower costs are made available, it is not difficult to realize the danger to the development of the country if this incentive to improvement is removed or impaired. However, this is as yet no more than a remote prospective danger, for certainly the incentive is now very great and improvements in transportation are being made at an unprecedented pace.

In the period from 1920 to 1935, the Commission's transportation jurisdiction, except for a limited authority over pipe lines, was confined to railroads and allied carriers, and the power to fix minimum rates was used very sparingly. The railroads rarely sought its use. There were important cases, however, where it was used, largely on the Commission's own initiative, to protect the rate structure against threatened rate wars; and in the exercise of its discretion to grant or withhold relief from the prohibition against charging more for a short than for a long haul over the same route, the Commission undertook to prevent certain competitive railroad rates from going below a "reasonably compensatory" level.

Since the passage of the Motor Carrier Act, 1935, however, the power to prescribe minimum rates has been invoked much more frequently. Interest-

ingly enough, the motor carriers have often sought its use to curb what they deemed to be demoralizing and destructive competition in their own ranks, and both railroads and motor carriers have increasingly prayed for its use against each other. In the past year or so the competition between these two forms of carriers has grown in intensity and virulence, and in a considerable number of instances the Commission has felt impelled to arrest the vicious circle of reductions through its suspension powers pending a thorough investigation.

To date the Commission has had no jurisdiction over the port-to-port rates of water carriers and only power to prescribe maximum rates for joint rail-and-water hauls. The legislation which has now reached the conference committee stage in the present Congress, however, proposes to extend the jurisdiction of the Commission, so that it will cover water carriers in much the same way as railroads and motor carriers. Obviously, if this is done, our problems will not be simplified. On the other hand, the opportunities to bring about a better co-ordination in the use of these three modes of transportation, to the advantage of the public as well as of the carriers, ought to be increased.

In so short a paper as this, it is of course impossible to give more than a cursory indication of the problems which are involved in the attempt, by public regulation, to adjust the rates of competing forms of transportation. Enough has been said, however, to suggest that the lot of regulatory bodies, like that of which I am a member, which have this task to do is, like that of the policeman, not a happy one. I often wish that it could be my good fortune to have in hand the regulation of a prosperous monopoly. It must, I feel sure, be an infinitely easier task than the regulation of a multitude of violently competing and more or less impecunious carriers. The latter work requires, if it is to be done at all satisfactorily, an extraordinary amount of patience, care, and wisdom. The stock of those qualities which we possess is strictly limited, and if the economists of the country can help us with their own mental powers and stores of acquired knowledge, we shall be very grateful indeed.

ASPECTS OF THE PROBLEM OF PUBLIC AIDS TO TRANSPORTATION

By CHARLES S. MORGAN
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I wish to make it clear at the outset that the views expressed in this paper are my own and are not to be attributed to the Interstate Commerce Commission.

The problem of subsidy or, to use a broader term, of public aids to transportation is part of the larger problem of adjustment created by the marked expansion of facilities, both public and private, in the last two decades in the face of a basically lower rate of growth in the sum total of demand for transportation service. From 1920 to 1937, there was a net addition of 24 billion dollars, or about 85 per cent, to our transportation plant,[1] not including sums tied up in motor vehicles, water transport equipment, airplanes, garages, shops, motor terminals, etc.[2] Population, on the other hand, increased only 23 per cent and, apart from the depression, production has shown little ability to maintain its prewar rate of growth. Further large public expenditures are being asked for: an as yet undetermined sum, necessarily involving billions, for a "master plan of free highway development," including drastic changes in urban transport facilities,[3] half a billion for a system of federal airports,[4] 240 million dollars for this waterway and 100 million for that one, and so on apparently without end. Users will pay all or part of the cost of certain of the facilities contemplated; recoupment from land operations is considered a possibility in others; and in others no compensation is expected from the benefited users.

Quite apart, then, from the question whether present facilities or future ones involve or will involve public aid, and quite apart from the fiscal problems presented, there is the difficult question of absorbing transportation facilities of such magnitude into our economic system.

Still apart from the question of whether or not they confer public aid,

[1] Railroads, 9.9 billions; highways, roads and streets, 17.8 billions; pipe lines, 0.8 billion; river and harbor improvements, 0.9 billion; airways and airports, 0.2 billion; less retirements, 5.8 billions, mainly railroad but also including extensive abandonments of interurban railways. In addition, nearly 2 billions of funds have been privately invested in urban transit facilities.

[2] Of the foregoing 24 billion dollars, 19 billions, or nearly 80 per cent, represented public investment, mainly in roads and streets. Giving effect to the other items mentioned above, total expenditures made in 1937 for new transportation facilities and for maintenance of all facilities are found to have been divided between public and private in substantially the same ratio as they had been in the single year 1921. This ratio is 87 per cent private and 13 per cent public.

[3] Bureau of Public Roads, Toll Roads and Free Roads, part II (House Doc. 272, 76th Cong., 1st Sess.).

[4] Civil Aeronautics Authority, Airport Survey (House Doc. 245, 76th Cong., 1st Sess.).

public provision of facilities has two other consequences which have served to make the last two decades dizzy ones in the field of transportation.

The user of public facilities, if he pays at all, pays as he goes. The ease with which he could and in some cases still may engage in transport operations, for-hire or private, has disturbed existing transportation agencies, shippers, and regulatory principles to the very core. Conditions had to grow worse before they could become better. State regulation of motor carriers began at a fairly early date, but only after the lapse of fifteen years had revealed the elements of strength and weakness and the needs of such carriers could they be brought under federal regulation. Air transportation matured more quickly. Water transportation remains unregulated in considerable part. Regulation does not, of course, put an end to problems, but it brings them under needed public scrutiny.

The other and perhaps more disturbing phase is the obvious enough fact that private transportation operations, other than those of certain pipe lines and minor private railroads, are made possible only by public provision of facilities. So far as can now be seen, it is doubtful whether there is any legal basis on which to check the expansion of private transport, except to a limited extent through the imposition of safety regulations or, where conflicts with local interests, as in the marketing of fruits and vegetables, are considered so serious as to require and permit local taxation, bonding, and similar restrictive measures. In certain instances, private transportation is the only form available. Where it is competitive with for-hire, as in the case, for example, of the large barging operations of the steel and oil companies, it generally is more efficient than common-carrier service employing the same medium and, less frequently, than any for-hire carriage. Private transportation by water is generally and that by highway is often a handmaiden of large industrial units. It therefore has serious economic and social implications. The pressure so created has, within the past fortnight, led the Commission to abandon its position of over fifty years' standing against the charging of a lower rate on a so-called "multiple" car shipment than on a single carload.[5] Closely allied to large industries are the so-called "contract operations." These also are found only where facilities are publicly provided. Regulation of such operations presents especial difficulties.

These broad remarks do not necessarily signify that "something should be done" about private transportation. If its costs are truly lower and its operations are conducted to this end only, it is certain to expand or to act as a leveler of for-hire rates. My only purpose is to emphasize the fact that there is here a basically disturbing influence associated with public

[5] I. & S. 4645, *Molasses, New Orleans, La., to Peoria and Pekin, Ill.* The contrast is not as sharp as is here indicated, however, in that commodity rates have long been influenced by volume of shipments and methods of handling.

provision of facilities which has larger implications than those of subsidy, considered alone.

Within this larger framework of facilities provided by the public is that part that is used under conditions of subsidy or public aid. Presented here are the additional questions of how agencies receiving public aids and those not receiving them, or agencies receiving aid in different amounts, can continue to compete with one another, and also questions of coping with the repercussions created by public aids on sections, localities, and individual shippers dependent on different forms of transportation. The problem is far more than a carrier problem. Those who have followed transportation briefs in the past ten years know that there has been no lack of defense and offense. Special pleading, name calling, rate cutting, and efforts in the direction of securing restrictive legislation have abounded. At the moment, the situation is one of unbridled debate leading to little conviction.

How, it may be asked, did this condition come about? What have been the forces at work? Doubtless these have occurred to you as I have proceeded. (a) The most obvious is the irresistible pressure of technological advances. Highway, air, and certain pipe-line and barge operations are the result of new and in some cases revolutionary developments in the arts. Commercial highway transportation, large as it has grown, is historically an incident of the improvement of roads and streets for the private passenger car.[6] It is largely unique in its sharing of facilities provided primarily for other purposes. This fact of joint use confers substantial net advantages, inasmuch as highways for solely truck and bus use, beyond short stretches, could not be supported by commercial vehicles alone.[7] It does not, however, enter into the determination of whether or not public aid has been conferred on this branch of transportation.

(b) Another group of influences are related to the need, or assumed need, for relief from competitive pressures. Waterway improvements, sought as a means of directly or indirectly lowering transportation charges for a section, locality, or particular shippers, readily come to mind. Another type of competitive pressure is illustrated by the truly remarkable expansion in the last few years of barge transportation of petroleum products. In at least certain instances these operations represent an effort to cope with the rapidly expanding transportation of such products by pipe line. An interest-

[6] It is not intended to imply that special facilities have not been provided for larger vehicles.

[7] Complaint sometimes is made that users of public facilities obtain an unfair advantage in that they do not have to concern themselves with "right-of-way problems." They can, it is said, concentrate on transportation as such, while railroad executives have broader problems to consider. The answer that highway interests, at least, would make is that coping with the interferences created by the passenger car and with the difficulties of obtaining and protecting operating rights produces managerial and operating worries that amply compensate.

ing story in industrial economics, involving also the relations of refinery locations to points of production of crude oil supplies, is unfolding here. The railroads, placing perhaps too much weight on the assurances of the Transportation Act of 1920, and faced with what they interpreted as a threat of government ownership if service did not improve, took a bold stand in 1923 to improve their facilities and lower their unit costs. The result was a huge increase (roughly one third) in investment, to 1932. Since then they have continued, as funds permitted, to modernize their plant in order the better to meet the competition of other forms of transportation.

(c) A final reason for the large increase in public and private investment in transportation facilities in the past fifteen or twenty years was, I am sure, the misreading of the indications of the future demand for commercial transportation service in the aggregate. The unusually heavy traffic of the War and early postwar years exerted considerable influence in this respect. The basic slowing down of population growth, discernible in 1920 to those who followed such matters, despite outward evidence to the contrary, was totally unknown to the general public, and there were those who preached the doctrine of an enduring prosperity and an ever expanding economy to a large group of willing listeners. Use of the private car has, of course, multiplied beyond all expectations.

We have, then, as the result of increased investments, in some instances representing public aid, a major problem in the rationalization of transportation facilities. The job of transporting the nation's goods and travelers has been split up to a degree never before dreamed of. The railroads, our only all-service transportation agency, now operate on a narrower rate base and are driven to increasing their rates, to the limited extent possible, on captive traffic, while drastically cutting other rates. Other carriers have difficulty in hanging on. The conditions in general are approaching chaos. Whatever the way out—whether through resorting to a cost basis of rates or in some other direction—the long-run effects of these new competitive forces may prove to be major changes in the economic structure of the country.

The more important it is, therefore, that the facts respecting public aids and what can be done about them be ascertained. There is such need not only to clarify the relations of carriers (the places of each in the transportation structure, the possibilities of replacing rate cutting with co-ordination, the removal of baffling uncertainties), but also to enable a wise policy in the authorization of further outlays for public and private transportation facilities. Basic questions of rate and tax policy are presented. Whether or not action will follow upon the development of facts with which reasonable persons will agree is, of course, a matter for discussion in other forums. If my reading of the signs is correct, the country

now is at least ready to examine the facts with an open mind. These facts can be presented in a convincing way only by adherence to consistent principles in the determination of publicly-borne costs, one form of transportation compared with another, and by adhering to only those principles which, with due consideration of differences in conditions under which the facilities are provided, arise out of privately-conducted transportation operations. Where considerations other than those of an economic nature do enter in, they should be given a proper label for all to see.

In order to emphasize these matters, I shall pass over the problems presented in measuring the aids received by the railroads in the distant past, certain recent aids to railroads, the aid represented in the operations of the Inland Waterways Corporation, the problems of joint cost allocation presented by certain waterway projects and by the air-mail contracts, and such essential technical questions as the determination of the service lives of roads, bridges, locks, and dams, of how thick a concrete pavement slab should be to support a defined load, or of the bearing power of a flexible pavement. Aids to railroads generally resulted in an increase in the proprietorship account and only in the case of certain of the federal land grants involved a contractual obligation to the donor. That there are few direct grants to an individual carrier at the present time should be evident from what has gone before. I also wish to remark that no finding of public aid can be carried to the point of complete accuracy.

It is encouraging that in the more popular discussions of the aids question, the "annual cost" concept is superseding the old "expenditures" basis of defining the costs that, less payments made, if any, are assumed to measure public aid. Much has been heard about the "commercial" concept and the "public utility" concept in the case of the highways, though not elsewhere. I shall return to these matters after a discussion, necessarily brief, of the two most controversial factors in the determination of annual cost. This discussion may seem unusual to some of you, but I can assure you that it is far from that in the minds of the highway, waterway, air, and railroad interests. The sums involved are staggering.

Annual cost as commonly used represents the sum of a given year's operating expenses, including a charge for depreciation or its equivalent in the form of amortization of bonds, and interest or return on capital invested. Some are strongly of the opinion that the only interest to be considered is that actually paid on obligations incurred to provide the specific facilities that are being costed, and that no use should be made of the concept of a return as such; some are of the opinion that a return should be reckoned on the investment, whatever its source, less that part written off by depreciation or amortization charges; others, while recognizing the legitimacy of a return in this latter sense, urge that it should be offset by interest on the annual money value of the benefits or savings conferred,

as explained hereinafter. In addition, it has been urged that taxes on the depreciated investment in the public facilities should be included as a cost element.

Taxes can be disposed of briefly. It is proper to set up a theoretical tax charge for purposes of comparison of the costs of different agencies of transportation, as when an appropriation measure involving a facility which will be competitive with the railroads is under consideration, and, in their wisdom, policy-making bodies could, though it seems altogether unlikely that they would, consider the assessment of such a charge for revenue purposes. Except in a very special and limited sense, taxes are not a cost, however, and should not figure in the determination of public aid.

There is the utmost confusion with respect to the item of interest. As stated above, all transportation facilities—water, highway, air—should be treated alike. The recent head of the Inland Waterways Corporation, in holding that interest is not a cost unless it has been earned, failed to recognize a basic term of the experiment he was conducting. While under the accounting regulations he was required to observe he could not have set such interest up on his books, he had the precedent of the Panama Canal, which for a number of years has included interest as a "statistical charge."

The reasoning employed by persons concerned with inland waterway improvements proper is similarly difficult to accept. To say that the annual cost of a waterway cannot be found without consideration of computed interest on savings appears to be a confusion of cause and effect. The costs should be as clearly determined as possible; the savings should also be estimated to the extent possible and they may, for purposes of appraisal, be set against costs in their yearly amount (not as interest on savings). The result is a comparison of costs with benefits. The latter are not, however, true economic benefits, inasmuch as they are derived from comparisons of the costs to shippers of using an agency, the railroads, which meets or endeavors to meet a full line of costs, with those of using the services of a carrier which in no case bears the cost of its right of way. Consideration also needs to be given in this connection to the effects of railroad rate cutting, which translates direct waterway benefits into indirect ones. It is urged that waterways have not been given an opportunity to show what they can do, and that recourse to these indirect benefits in justification of the government's outlay is warranted. Again, however, the question is one of the economic significance of the results produced by the competition in this form of private with public facilities.

Highways present more difficult questions. Here motor vehicle users pay huge sums year after year. They therefore urge that they would be charged twice if interest were set up: first, to provide funds with which the facilities are created and, second, to pay a return on such funds. However, the reason-

ing employed in the case of waterways is equally applicable here. Interest is a cost and the better the facilities the greater is such cost. These facts are recognized in the planning of highway improvements. The recent rejection by the Bureau of Public Roads (now the Public Roads Administration) of a plan for seven transcontinental superhighways obviously turned in considerable part on the inability of users to meet that portion of the annual cost represented by interest. The answer would be the same whether bonds were issued for the purpose or recourse was had to current Treasury revenue. Likewise, the alternative plans for "free highway development" face the same cost item.

The contrary view assumes that motor vehicle users are the principals and that governments are their agents. No such relation obtains. Governments plan and own the facilities, bear the attendant risks, and ultimately must either call upon general revenues or lose their investment through deferment of maintenance if motor vehicle users do not pay the share of the cost apportioned to them. Users are not owners but, in a sense, "customers."

The essential purpose of an interest computation is to spread the costs represented by invested funds over the life of the facilities. Individual users come and go, in point of time and in point of geography. If the full cost of serving them at a time and in a place is to be determined, interest must be included. Only in this way can a proper bill be rendered on the basis of a division of costs between such users and all other beneficiaries of the improvements. However, should it develop that motor vehicle users more than meet their obligations in a given instance, the difference represents a contribution for which they may be given credit. Theoretically, this contribution would be returned to them in the form of annual depreciation or amortization credits and of interest on unused balances. This adjustment, if necessary, would consistently reflect the relation of the motor vehicle user to the governments.

It may be asked, however, what would be done with the interest so collected. This question largely misses the point. The preceding discussion has sought to show the need for better cost-finding in order that governments may better know what they are accomplishing. Peterson suggested in 1932 that the states may have been collecting interest without knowing they were doing so; that is, by applying motor vehicle user funds to extensions of plant.[8] How far such has been or will be the case can be determined, however, only by knowledge of costs from year to year. What, for example, has been the extent of consumption of capital through unrecognized depreciation? With good cost records, better knowledge of service lives, and running inventories of highway facilities, a cost statement

[8] Shorey Peterson, "Highway Policy on a Commercial Basis," *Quarterly Journal of Economics*, May, 1932.

on which action can be premised becomes possible. Progress is being made in each of these directions. What action will be taken is a matter of public policy, and different courses of action will appeal to different policy-making agencies.

I come next to a brief discussion of the "public utility" concept, especially as it has been developed by the railroads.[9] Peterson formulated the "commercial concept" some years earlier but did not carry his reasoning to the extremes found in the railroad report. There were other earlier discussions, particularly those of Dean Anson Marston, of Iowa State College. Less fully developed in certain respects than the railroads' concept, Dean Marston has gone far in his suggestion that public facilities, other than land, be made subject to the usual processes of valuation for rate-making purposes. As a matter of economic logic there seems to be no need whatever for departing from the investment figures on the books; why the public should bear the burden of an inflated rate base if prices rise or why it should suffer a loss if prices fall is difficult to understand. If all prices and rates moved sympathetically, there would perhaps be a theoretical reason for varying the highway investment figure accordingly, but such a counsel of perfection has no appeal in a period when competition has pushed aside abstract legal rights to earn.

The whole problem is, in fact, one of degree, for it cannot be denied that the collection of special user payments connotes that governments are engaged from some points of view in a quasi-commercial enterprise, as distinguished from their relations to users of schools and parks. The preceding discussion of interest shows that such is the case. But the tendency is to go too far and to make claims that find no support in the relation of highways and streets to all who use or benefit by them. Whatever may be said to the contrary, the public utility concept as developed by the railroads has had no real test in a court of law and has been accepted by no official agency speaking authoritatively for the general public interest.[10] The question is still in the field of debate.

Two of the three special matters involved in an evaluation of the concept have already been discussed as extensively as time permits. These are interest and taxes. The remaining question is the assignment of responsibility for costs between motor vehicle users as a class and all other benefited parties. I cannot go into any detail, but will limit myself to one of several vital spots at which criticism must be directed.

[9] Breed, Older, and Downs, *Highway Costs, A Study of Highway Costs and Motor Vehicle Payments in the United States,* 1939, a report prepared for the Association of American Railroads.

[10] Colorado has recently adopted a resolution which calls for an annual ascertainment of costs, including interest, taxes, and a charge based on the value of lands occupied by roads and streets, and an allocation of the sum of these items between motor vehicle users and others according to a prescribed formula and between classes of users on a ton-mile basis. As yet, however, it is not known whether rates of taxation will actually be adjusted according to the findings of such studies.

The concept hinges on the so-called "system concept." It is urged that, till he crosses a state line, the motor vehicle user is aware of no jurisdictional boundaries and that all roads and streets within a state, from a busy main highway to a cul-de-sac, constitute an organic whole. Streets, it is said, are merely terminal facilities for intercity operations and secondary rural roads are branch lines or feeders. "The motor vehicle," it is urged, "has removed the local use concept from these highways." Stress is laid upon the analogy to rail operations. On the basis of this reasoning, conclusions are drawn as to the percentages of motor vehicle user responsibility for each of the three road systems.

Without elaborating upon an answer, it seems clear that far too little weight has been given the facts long known but now clearly established by the Highway Planning Surveys as to the preponderantly local character of motor vehicle use. Thus, in eleven states in a recent year, 37 per cent of all trips outside city limits by passenger cars and trucks were to points less than five miles distant, 64 per cent to points less than ten miles distant, and 84 per cent to points less than twenty miles distant. One-way trips of a hundred miles or over constituted less than 2 per cent of the total.[11] If the multitude of short trips made in purely urban travel or in running from the farm to the country store were also considered, further emphasis would be given to the fact that the motor vehicle is so essentially fitted into the average man's daily life, with its measures of work done and pleasures taken, normally at no great distance from his home, that its identification with intercity transportation must be limited. The consequences are that the relations of terminals and feeders found in rail transportation have little to match them in the motor vehicle field. This conclusion serves to indicate, then, the need, in assigning responsibility, for fully-reasoned distinctions between the functions of our different road and street systems.

There are numerous other questions which require careful public consideration. Some relate to what can be done with the facilities we now have, some to tolls, local sharing of the costs of waterway improvements, abandonment of uneconomic projects, selling the Inland Waterways Corporation operation, and some to the determination, by more expert methods of appraisal, the real public interest in the making of further transportation improvements. The depression has revealed the weaknesses of our present transportation regime and any disinterested appraisal suffices to show that much public money has been expended uneconomically. A new orientation is needed, with due consideration of the changed tempo of our economic life and of the need for consistent, objective appraisals of what it is expected to accomplish with given expenditures. Public aid always results in over-

[11] R. H. Paddock and R. P. Rogers, "Preliminary Results of Road-Use Studies," *Public Roads*, May, 1939, p. 52.

building and often in sheer duplication of facilities. The country, now more than ever, cannot afford these results. The problem is largely up to shippers, some of whom cry out against the drastic changes in marketing methods introduced by new forms of transportation, but others of whom continue their indifferent attitude toward government expenditures in their desire to bid one form of transportation off against another. There is need for an impartial, independent review agency to whom all projects involving federal expenditures for transportation should be referred for critical analysis. A first task of such an agency would be a clear definition of the basic economic concepts involved, after hearing from all who have something to contribute. Such a body would co-ordinate the interests of individual departments in particular forms of transportation, see the problem as a whole, and be able to advise the Congress, the President, and the states. There have been beginnings in this direction in the past few years; they should be carried to a point of greater usefulness.

In closing, may I be permitted to say that the shortly forthcoming posthumous report on public aids to transportation, prepared by my associates and myself for the former Federal Co-ordinator of Transportation, develops at length the reasoning I have briefly sketched here and also gives the findings as to public aid, which I have been unable to give you at this time.

THE POSSIBILITIES OF ECONOMIES BY RAILROAD CONSOLIDATION AND CO-ORDINATION

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It appears to be generally agreed among economists and other students of the railroad problem that competitive wastes are one of the causes of the present railroad illness. I believe that it would be more accurate to say that curtailment of competition would now offset to some extent some of the debilitating influences of other causes of railroad ills, such as the technological improvement of highways and highway carriers. It is my purpose to discuss the possibilities of actually effecting helpful consolidations and co-ordinations, what the railroads and the government have been striving or not striving to do in these directions and the forces which inhibit progress along this line. I shall divide the paper into the obvious two parts: consolidation and co-ordination.

I

By consolidation I here mean to cover those combinations whereby one company becomes dominant in the management of other companies or another company as opposed to those joint arrangements for the more economical use of facilities, which latter I am here referring to as railroad co-ordination.

We would not be worrying about reducing the number of our railroad systems if we had not had the Sherman Act of 1890 or the Northern Securities Company, Union Pacific and Southern Pacific Supreme Court cases on the application of that law. The economic and emotional drives toward the creation of larger and therefore fewer railroad systems have been strong for a hundred years, the means most easily taken to accomplish the desired ends being to acquire financial control of the companies concerned and vote the stock in favor of some form of combination. The purposes were of course many, but the desire for more traffic, to be taken from a competitor, or the protection of traffic which might be taken by a competitor, were, along with occasional combinations engineered primarily to make money through the financing of the combination, probably the most common. Both of the first two aims are contra the spirit and letter of the Sherman Act. The latter aim has been made difficult of attainment by the bestowal on the Interstate Commerce Commission in 1920 of regulation of security issue, and the regulation of railroad holding companies as well as operating companies by the Commission under the Act of 1933.

The prohibitions of the Sherman Act have, of course, been somewhat offset since 1920 by the right of the Interstate Commerce Commission to grant relief from the provisions of that act where combinations are con-

sidered to be in the public interest. In 1920 the law arranged for permissive consolidation on a grandiose scale, the hope being that the Commission would be flooded with requests for consolidations and would allow only those which were in the public interest. This public interest appeared to Congress to be the having of a few systems of about equal strength in each of several regions in the country. Competition and existing channels of trade and commerce were, however, to be preserved wherever possible. Unfortunately for the smooth working of the provisions of this act strong railroads are usually interested in inequality of systems rather than in equality. The presence of the consolidation provisions in the Act of 1920 was quite evidently to make rate making easier for the Commission and these consolidation provisions were well worked out from that angle. The collapse of the attempt to relate the general level of railroad rates to valuation plus the lack of incentive on the part of the railroads to combine for other than the main reasons mentioned above has made the consolidation part of the Transportation Act ineffective to say the least.

The only important combinations since the Act of 1920 were the control of the Cotton Belt by the Southern Pacific, the building up of the Baltimore and Ohio System, the building up of the ill-fated Van Sweringen System (which, from an operating and traffic standpoint alone, I believe was a very estimable job) and the control of some roads by Pennsylvania Railroad interests or those sympathetic to them. Although the Commission decided after publishing its tentative plan as to how best to combine the railroads of the country into a limited number of systems that no one group of men could satisfactorily decide what was the best alignment, presidential pressure produced a final plan in 1929 and the eastern railroads presented to the Commission in 1931 a variation of their own, known as the Four Party Plan, which the ICC accepted with a few minor changes. Depression plus lack of incentive prevented any important action on this plan.

In neither the Ripley Plan drawn up for the ICC, the Tentative Plan, based upon the Ripley Plan, the ICC Final Plan, nor the Four Party Plan were the economies of consolidation estimated with any great care. And little wonder since the purpose of the first three was the creation of roughly equal systems for rate making purposes and of the fourth the lining up of the eastern roads in a way more satisfactory from their own competitive viewpoints, in case consolidation was forced upon them. In 1933 came the first well-publicized plan to combine the railroads of the United States into a limited number of systems, the main purpose of which was to make transportation cheaper to manufacture. This was the Prince Plan.

The Prince Plan, put forward by a private individual, recommended combining the roads of the United States under seven lease-holding companies, and estimated that the savings would amount to 743 million dollars per year if based on 1932 traffic figures. The net operating income in 1932

of the Class I railroads of the United States had been only about 326 millions. The savings were to be made primarily through the rerouting of traffic so as to concentrate it on the best routes and thereby reduce the ton-mile cost of operation. While the average freight density in 1932 was about 1,000,000 tons per mile, various lines of road reached from 20,000,000 to 40,000,000 tons per mile per year and the top record was 50,000,000 tons per mile per year. The Prince Plan stated: "It is to obtain the very low unit costs possible only in the higher ranges of tonnage density that this consolidation plan has been developed to insure maximum concentration of traffic on efficient mileage and in terminals selected because of their superior characteristics and standards."[1] The plan called for two systems in the East, a Pennsylvania-Baltimore and Ohio combination on the one hand, and a New York Central-Van Sweringen combination on the other. Two systems were set up in the Southeast, one each in the Southwest, Central West, and Northwest, although these latter were not regional monopolies, there being considerable intermingling of lines from these systems.[2] The Prince Plan and its envisioned savings received the careful scrutiny of advisory committees made up of railroad men which reported to Mr. Eastman who had become Federal Co-ordinator of Transportation in 1933. These boards cut the savings figures from $743,000,000 to $218,462,825 and this latter figure was predicated on the ability to abandon road and facilities wherever the railroads desired to do so. Somewhat offsetting this optimistic element was the rule of the committees that co-ordination of facilities was not to be counted on unless the remaining facility could handle the 1929 traffic actually handled by the uncombined

[1] *Poor's Manual,* 1938, p. 42. An outline of the Prince Plan is given here.

[2] Eastern Region, System No. 1, North System, was built around the New York Central, Nickel Plate, Erie, Lackawanna, Delaware & Hudson, Pere Marquette, Chesapeake & Ohio, Virginian, and Boston & Maine railroads with numerous other lines as well.

Eastern Region, System No. 2, South System, was built around the Pennsylvania, Baltimore & Ohio, Reading, Central R.R. of New Jersey, Norfolk & Western, and New Haven railroads with many other lines as well.

Southern Region, System No. 3, Southeast System, was built around the Atlantic Coast Line, Seaboard Air Line, Louisville & Nashville and Florida East Coast railways with many other lines in addition.

Southern Region, System No. 4, Mississippi Valley System, was built around the Southern Rlwy., Central of Georgia, the Illinois Central, and the Frisco lines east of Memphis as well as many other lines. The Illinois Central line west from Chicago was excluded.

Northwestern Region, System No. 5, was built around the Burlington, Chicago Great Western, Milwaukee, Great Northern, Northern Pacific, Soo Line, and Western Pacific with many other lines in addition. The Denver & Salt Lake, plus trackage rights over a large part of the Denver & Rio Grande were included.

The Central Western Region, System No. 6, was built around the Chicago & Northwestern, the Rock Island, Kansas City Southern, the Union Pacific, and the Southern Pacific with many other lines in addition.

Southwestern Region, System No. 7, was built around the Santa Fe, Katy, Missouri Pacific, Frisco (west of the Mississippi River) and Texas & Pacific as well as many other lines.

These summaries are taken from Senate Document 119, 73rd Congress, second session, p. 118 ff., where will be found the detailed list of the railroads in each system. A list will also be found in *Poor's Manual of Railroads* for 1938.

facilities plus 20 per cent. By regions, the Prince Plan savings and the Advisory Committee savings were as follows:[3]

	Prince Plan	*Advisory Committee*
System No. 1	$173,192,000	$48,765,500
System No. 2	185,192,000	65,078,000
System No. 3	48,210,000	14,736,650
System No. 4	52,262,000	9,953,638
System Nos. 5, 6, and 7 (total)	284,633,000	79,929,037

The comparisons in the case of Systems 1, 2, 3, and 4 are not exact since there were some minor adjustments in the allocation of railroads between systems. In the case of Systems 5, 6, and 7 there were important re-allocations of railroads between the systems and the exact comparisons of figures would be useless. While it is natural to expect that the railroad advisory committees would lean toward a very conservative figure, it is also probable that any attempt at consolidation along such lines as the Prince Plan envisaged would arouse an antagonism from labor and local interests which would result in blocking a large amount of the savings which both sets of figures are based on. It seems to the author safe to assume that savings under such a plan would not in practice exceed the Advisory Committee figures. An idea of the way in which the total figures above are made up is given in the following table which breaks down the savings among the main branches of expenditure for System No. 1.

Estimates of Economies by Eastern Advisory Committee[4]

	System No. 1
I. Maintenance of ways and structures	
A. Abandonment of main track and branch line—1,183 miles at $985 per mile	$1,165,255
Abandonment of yard tracks and sidings—440 miles at $340 per mile	149,600
B. Reduced maintenance first class to second class 260 miles at $380 per mile	98,800
C. Maintenance savings as result of abandonment or restricted use of structures	1,286,345
II. Maintenance of equipment	
A. Locomotive repairs	6,680,000
B. Freight car repairs	2,650,000
C. Passenger car repairs	104,000
III. Traffic	
Reduction due to consolidation of organizations and abandonment of overlapping solicitation	5,510,000
IV. Transporation	
A. Freight train mile reduction	7,650,000
B. Passenger train mile reduction	870,000
C. Station expenses	1,986,000
D. Yard expenses	3,236,000
E. Other transportation expenses	323,000

[3] *Sen. Doc. 119,* 73rd Congress, 2d session, pp. 109-111. This document includes the Poland Report on the Prince Plan. Mr. Poland was in charge of the study for Co-ordinator Eastman.

[4] These figures are taken from the manuscript report. They were not included in the so-called "Poland" report in *Sen. Doc. 119* above.

V. Miscellaneous expenses	
A. Dining cars	100,000
B. Bus operation	none[a]
C. Other	520,000
VI. General	
A. General office expense	5,862,000
B. Expense of division superintendents	6,052,000
VII. Total economies for System No. 1	44,243,000[b]

[a] On System No. 2 there was an estimated saving of $425,000 on this item. The Reading-Jersey Central operated twelve round trips between New York and Philadelphia while the Pennsylvania Greyhound operated twenty-one round trips. It was estimated that if the Pennsylvania Greyhound increased its service 25 per cent and the Reading-Jersey Central bus service ceased operation the saving would be $125,000 per year. Abandonment of the B. & O. bus service in the New York metropolitan area would save, it was estimated, $300,000 per year. The $125,000 saving was found by multiplying 498,400 bus miles by twenty-five cents per mile.

[b] This total figure became, after various adjustments, the 48,765,500 figure in the preceding table.

The Committee estimated that 35,000 out of the 467,000 employees of 1932 would be released and twice as many dislocated, that it would adversely affect small communities and benefit some large ones, that its effect on the growth of the country would be good (one member differed), and that management could handle such large systems but no larger. The Prince Plan suggested arrangements for the protection of labor of a kind roughly similar to those of the Washington Agreement of 1936 and the estimated savings given above are after such estimated protective payments. The Prince Plan, like its predecessors, has not been put into effect.

In his report to Congress in June, 1934, Mr. Eastman included for discussion a plan for new railroad legislation by Mr. Leslie Craven, formerly of Duke University Law School. This plan included many interesting features not pertinent here and one feature which is very pertinent. It provided for compulsory consolidation. Mr. Craven believed that Congress could compel consolidation of railroads "under its powers to establish post-offices and post roads and to provide for the common defense," but that an even better basis was that "under the interstate commerce clause the federal government has ample power to require compulsory unification of the existing lines into federal corporations, and to forbid the conduct of interstate commerce by any other corporations. The sovereignty of Congress over interstate commerce is plenary and limited only by the fifth amendment. If Congress decides that it is necessary to require consolidation in the regulation of interstate commerce, its judgment in that respect is not subject to investigation by the courts."[5] While the membership of the Supreme Court might have resulted in official disagreement with this view in 1934, it is my belief that with the present make-up of the Court congressional power in this regard would now be upheld.

[5] *Sen. Doc. 119,* 73rd Congress, 2d session, p. 98.

Before discussing the opposition to consolidation, I should like to focus attention for a moment on the case of the Associated Railways.[6] The Transportation Act of 1920 planned to have the railroads propose consolidations to the Interstate Commerce Commission and have that body allow some and dismiss others, depending on how they fitted into the Commission's plan. The Minneapolis and St. Louis Railroad has been a "weak sister" among the railroads of the United States for a long time. It operates through a well-railroaded area of the country from the Twin Cities south and west. Its main line runs south and then east to Peoria. It has many branches. In 1934 the RFC was struggling with the problem of a loan to this railroad and Chairman Jones suggested that the RFC would be willing to finance a consolidation project which was based upon the splitting of the Minneapolis and St. Louis between the other carriers in the region. These were the Chicago and Northwestern Railway, the Chicago, Burlington and Quincy Railroad, the Chicago, Milwaukee, St. Paul and Pacific Railroad, the Chicago, Rock Island, and Pacific Railway, the Great Northern Railway, the Illinois Central Railroad, the Minneapolis, St. Paul and Sault St. Marie Railway. The Chicago Great Western Railroad was a party in the earlier stages of the plan but later withdrew. The Associated Railways Company was organized to acquire the property of the M. and St. L. for $7,200,000 to be loaned to the Associated by the RFC. The property was to be bought at auction which would have been the first time for many years that any bidder would have been present to offer to buy the M. and St. L. which had been bankrupt for a long time and had been hopefully announcing auction dates for some time past. The Associated was to abandon almost five hundred miles of road and sell the rest of the property to the other railroads mentioned above.

This is the type of consolidation project which from the viewpoint of the rationalizing of our national railroad system, of reducing wasteful duplication and resultant high cost of operation of the railroads as a whole appears to me highly desirable. In his excellent dissent on this case Commissioner Meyer states:[7]

> The applications before us represent a process or method which is essentially constructive, in spite of the unavoidable incidental destruction. This process will force itself upon many localities throughout the country as it has here because existing conditions compel it. In my opinion there is no other way out of the present railroad situation than to rearrange much of the remaining railroad mileage and to co-ordinate its operation within itself and with other agencies, especially with the highway. The unavoidable property losses accompanying rail and highway readjustments must be regretted and should be held at a minimum, but there is no way to escape them entirely. Not a single modern highway has been created without benefiting certain owners of property and damaging others. Few railroads can be abandoned without injury to some citizens. The loss of railroad employment can generally not be offset by gains in employment connected with the highway; yet a reduced number of railroad jobs is surely to be preferred over no railroad jobs. It would be most unsound to attempt to keep railroad mileage in operation purely for the jobs it

[6] 228 *ICC* 277.
[7] 228 *ICC* 378.

would perpetuate and when public convenience and necessity no longer require its operation.

The country at large may not fully realize what it is facing in the field of transportation and all that is connected with it. What is said here so briefly is intended both as a small contribution to general public thought on the subject and as a public notice of what in my judgment the country is up against.

But those representing labor on the Minneapolis and St. Louis, the shippers' organizations, the defense committees, and the state railroad commissions had no such views. And these groups and many others violently disapproved of the "dismemberment" of the railroad. The three petitions of the Associated Railways to the Interstate Commerce Commission were (1) to amend the Commission's consolidation plan, since the M. and St. L. had been assigned to the Illinois Central System (System No. 10) in the Commission's final consolidation plan of 1929; (2) to allow the Associated Railways to acquire the Minneapolis and St. Louis Railroad; and (3) to allow the Associated Railways to abandon certain trackage. The broader question of how these proposals fitted in with a wise long-run policy of reducing the competitive wastes in our railway system as a whole, although I believe it should have been the most important factor in the Commission's decision on all three above petitions, was lost sight of by the examiner in his report and apparently also lost sight of by members of the Commission with the exceptions of Commissioners Eastman, Miller, and Meyer.

The majority apparently focussed upon the question, "Can the Minneapolis and St. Louis exist by itself with the help of a new and superior management?" and since the conclusion was, "Yes, it probably can," the corollary became: service can therefore be preserved on most of the parts of the system which the Associated would otherwise abandon. Also, competitive routes and channels of trade could be preserved, to the satisfaction of whoever was responsible for that unfortunate phrase being incorporated into the Act of 1920. The reasoning used by the Commission was primarily that often used in an abandonment case: whether or not privations which would be inflicted by abandonment justify the continuation of the burden upon the railroad. This is at best a muddy concept since it customarily fails to go back of the word railroad to find who in fact is subsidizing the gratuitous service—what type of other shippers or security holders, etc. But since the ICC would not lay stress upon the validity of settling such a local issue upon the good or bad effects upon the railroad situation as a whole, its course was clear. It believed the M. and St. L. could be saved by better management and that labor and the communities would be saved from the painful results of abondonment. The petitions were all turned down. What I want to stress in this case is, first, that the Commission took the narrow view after (if not because of) vociferous local protest, and, secondly, the failure of this attempt at co-operative action (truly amazing

co-operative action in that seven roads succeeded in agreeing on one plan) could not help but be a very real damper on railroad co-operation toward similar rationalizations of the railroad situation.

Mr. Eastman and Commissioner Miller concurred in the results. These men did not believe that "having in mind the general railroad situation in western trunk line territory . . . . the consummation of this plan would be opposed to the public interest," that "in sum total the results would be beneficial so far as the general public interest is concerned," but that the creditors were "fairly entitled to retrieve as much as possible from the properties and since the present plan was developed there has been a change in conditions which makes it doubtful whether the plan now under consideration is the best that can be devised from their point of view."[8] They felt the plan should not be thrown aside but held in abeyance until it appeared whether the creditors could work out a better one. This approach appears at first sight to be the concentration upon another relatively "local" factor—the investor, like the shipper or the worker, rather than the national good; but Mr. Eastman's customary breadth of concept makes one suspect that his placing weight here is because he feels that the inflow of private capital into the railroad industry is essential (at least for a little while yet) to the welfare of the industry as a whole and that blocking this plan of the M. and St. L. creditors would have been a discouraging factor to investors in general. If that had been the main reason for Commission disapproval, the decision might not have had the same deadening effect on railroad management in regard to co-operation toward consolidation as it did.

Almost twenty years have now passed since the Transportation Act of 1920 with its hoped for consolidations. The railroads are in general in a sorry plight and further consolidation would relieve them somewhat. Why does it not take place? Because opposition to consolidation has come from labor, from local interests, from the government, and from management.

Labor naturally opposes consolidation because the immediate effect of consolidation, other things being equal, is to reduce jobs even though in the long run it might result in more railroad jobs than if such projects were not consummated. Labor's view, if it believes government ownership means preservation of useless jobs, as it quite probably would, seems well justified when considered from the viewpoint of preserving employment within this industry. The fallacy does not appear clearly until one considers labor in the railroad industry as only a part of all labor in the country and realizes that the present attitude results in less goods and services being produced within a period than would be produced with more effective use of labor.

The evident danger of laying off men resulted in a protective clause in

[8] 228 *ICC* 375.

the "pro-co-ordination" Act of 1933. This act provided that:

> The number of employees in the service of a carrier shall not be reduced by reason of any action taken pursuant to the authority of this title below the number as shown by the pay rolls of employees in service during the month of May, 1933, after deducting the number who have been removed from the pay rolls after the effective date of this act by reason of death, normal retirements, or resignation, but not more in any one year than 5 per cent of said number in service during May, 1933; nor shall any employee in such service be deprived of employment such as he had during said month of May or be in a worse position with respect to his compensation for such employment, by reason of any action taken pursuant to the authority conferred by this title.[9]

Another section required compensation to employees for expenses and property losses suffered because of transfers resulting from co-ordinations. Mr. Eastman's vigorous attempts to advance co-ordination through intelligent study and exhortation followed during the next three years, during which time the subject of combinations of various kinds was alive, and in May of 1936 the major railroads of the country, with a few exceptions, and the labor organizations drew up and signed the so-called "Washington Agreement" which arranged for payments to men laid off because of combinations of one kind or another.

This five-year agreement provides for compensation for expenses and property losses in case of transfer and arranges for payments of 60 per cent of the previous average monthly earnings of an employee as remuneration to men laid off because of combinations. The length of time over which these payments continue varies according to the length of service with the company and runs, in the case of men with more than fifteen years' service, as long as five years. In lieu of such compensation an employee may accept a separation allowance as a bulk sum payment. This runs up to as much as one year's pay in the case of a man with fifteen years' service. This agreement became necessary, from the labor viewpoint, when it appeared that the office of Co-ordinator of Transportation would not be continued after June, 1936. The protection under the law of 1933 applied to combinations effected through that office.

The Washington Agreement was hailed as the overcoming of one of the main barriers to co-ordination and consolidation. It has not proved so, for although it has inhibited management only in the smaller co-ordinations it failed to affect the major opposing attitude of the organizations, the same organizations which succeeded in blocking extension of the office of Federal Co-ordinator after June, 1936. To quote from the official organ of one of the more vociferous of the train service brotherhoods:[10]

> I want to emphasize that so far as the Brotherhood of Railroad Trainmen is concerned, the agreement with the carriers relative to consolidation and co-ordination can in no sense be interpreted to mean that the way is clear for railroad consolidation and co-ordination. This Brotherhood will continue to fight as vigorously as it always has, such efforts to economize at the expense of humanity. . . . . We have now entered into an

[9] Section 7b of the Emergency Railroad Transportation Act of 1933.

[10] *The Railroad Trainman,* July, 1936, p. 386. The above statement appears in the "President's Department" of the magazine.

agreement with the carriers, designed, not to improve the standards of living or working conditions of railroad workers, but to share with them a small portion of the booty that would come to the coupon clippers if Wall Street's demand for "economy" at the expense of humanity, is carried out.

Labor believes consolidation means fewer jobs and is therefore against it. The legislative and executive departments of the government are labor conscious and labor's attitude is therefore of first importance in explaining the lack of consolidation over the past few years.

Local interests, those hurt through consolidation by withdrawal of shops, yards, shipping facilities, and services of all kinds, are powerful in the prevention of combinations, for the benefits to our society as a whole are not clear cut or easy for the average man to grasp; the deprivations coming from abandonment or curtailment of service or the shrinkage of population within a town are immediate and easy to visualize. Whether or not we should expect our national government to countenance such painful local readjustments in the interest of the long-run common good is a debated question. I think we should. But there is no question that in such a case as the Minneapolis and St. Louis our government is not now tending to do so. Like a group of men about to lose their jobs, local interests about to lose, or see decreases in, their incomes have no interest in the general plight of the railroads of the country under private operation. To them government ownership through wholesale bankruptcy would be highly preferable to the threatened loss of service with its unfortunate results.

Governmental opposition to consolidation has been expressed in three ways: by the ICC laying stress upon the effects on labor and local interests rather than a wise national economic policy; by a lack in liberalizing consolidation provisions of the Act of 1920; and (if it does have the power) by a lack in the enforcement of consolidation upon the railroads. In a government by pressure groups where there is no important pressure group working for consolidation it is not strange that we do not have it. What effective pressure there is in Congress is against it.

Management opposes consolidation much of the time because proposed plans almost always include some arrangements unsatisfactory to each party, because if existing channels of trade and commerce are preserved wherever practical and competition is preserved as much as possible the incentive toward combination decreases and lastly it is often felt that no matter what proposals are put forward the government's attitude will be suspicious and unco-operative. There is one notable exception which should be made when speaking of the government and that is the RFC which has endeavored to promote consolidation. Of course, from June, 1933-36, Mr. Eastman's activities were a striking exception also. But the ICC was careful not to commit itself as backing the Co-ordinator fully and Congress certainly did not.

In addition both the management, considered as human beings, and the

security holders often have reason to oppose consolidations. The two presidents of two individual roads cannot both be president of the ensuing top company and the uncertainty which a considered consolidation brings to the hearts of all men in the management of any company cannot be overlooked as an emotional factor in the numerous reports which are prepared prior to any decision on the matter. Finally the treatment of security holders depends primarily on the estimated savings and earnings of the new combination. Since the earnings vary from year to year and the estimates from day to day there are always likely to be some security holders who feel quite honestly that they should be treated differently.

With such opposing forces to consolidation it seems to me that there is only one way to get important consolidations in this country and the savings which would at least eventually ensue. That is through a federal law which requires consolidation into a limited number of systems, preferably not more than the seven in the Prince Plan. I believe that with the present make-up of the Supreme Court such a law would probably be held constitutional. I also believe that Congress feels it politically unwise to pass such a law and that we will therefore have no general consolidation, desirable as that is, for a considerable time to come.

II

The second division of this paper deals with railroad co-ordination. Included in this term are joint use of terminals, trackage rights of one road over another, pooling arrangements, in short, any arrangements which enable the work of two or more roads to be done at less cost through co-operation. Some of these arrangements make possible complete abandonment of some facilities, some simply reduce cost by allowing parts of properties to be maintained at a lower standard, and some attain their savings through reduction of operating costs by concentration of tonnage and reduction of train miles. There is little new about such arrangements. They have been prevalent for a hundred years or more. There are very many of them, the well-publicized figures of the Association of American Railroads being that 24,000 miles of track, 263 engine terminals, 1,366 freight stations, 1,902 passenger stations, 618 yards, and 472 large bridges are used jointly.[11] There is many a belt line owned jointly by trunk line roads and many a joint switching arrangement the country over. The Pennsylvania Railroad uses trackage arrangements whereby it operates over more than 400 miles on other lines and grants like privileges to other railroads over 570 miles of its own lines. It has 113 cases in which it receives trackage rights from other railroads and 195 in which it gives such rights. It owns jointly with other roads 27 railroads and uses 139 stations jointly

[11] Address by M. J. Gormley, Executive Assistant, Association of American Railroads, March 25, 1938, Springfield, Massachusetts.

with other roads. The question is not one then of why do the railroads not co-ordinate but considering the very great number of possibilities why do they not do it more? I shall describe first a few specific types of co-ordination and the problems involved, and then endeavor to clarify what it is which inhibits co-ordination and discuss the possibilities of overcoming such inhibitions.

A relatively simple instance of successful co-ordination involves the use by the Baltimore and Ohio Railroad of the Pittsburgh and Lake Erie R.R. tracks for 58 miles between McKeesport and Newcastle, Pennsylvania. It is a good example of a sensible co-ordination involving savings to the B. and O. well in excess of the additional expense to the P. and L.E. This arrangement follows the well-known formula of splitting the savings and the increased costs between the two railroads. It enables the Baltimore and Ohio to operate over a better grade line. The B. and O. retains its original line for local service and for through service between Pittsburgh and Buffalo. It is an arrangement which should last for a long time to come.

I should like to pay especial attention, however, to those co-ordination projects which have not reached consummation and I give here three fairly typical cases.

First is a simple case of two railroads meeting end to end. Two engine houses have been in use. The savings through use of one engine house for locomotives of both roads are not very great but they exist. Co-ordination has here been blocked by the labor organizations which refuse to allow the movements of locomotives of one road over the track of the other road between the station and the roundhouse except upon payment of additional wages. The adjustment board would probably uphold the organizations on this point. The savings under such an arrangement disappear.

Another case has to do with two roads which have branch feeder lines reaching up into a group of valleys. If the lines were co-ordinated, all important points could be served and there could be considerable abandonment of trackage. A proposal is made by the executives of one road that some rationalization of this situation be worked out and a plan proposed that envisages swapping of some lines, abandonment of others. On analysis it appears that the proposing road ends up with the best part of the territory; the second line with the worst. The second line then suggests its plan, in which it appears that the traffic is more evenly divided but road No. 2 is nevertheless now definitely on top. Although road No. 2 would be willing to discuss the problem further, road No. 1 disclaims any interest in proceeding further. The matter drops. This is merely human nature in its more usual state. If one is very idealistic one condemns it. If one tries to be practical, one should expect it and plan to meet it somehow.

Yet another typical instance of an unsuccessful attempt at co-ordination regards two roads which both reach into two small manufacturing towns in

different areas. The suggestion is made that each drop out of one town. There is no doubt but that service would remain excellent from each. This scheme did not go through mainly because the traffic department of one railroad thought that the prospects over the next few years of one region (the one which it would have to get out of) were more hopeful than the other. This road estimated that its branch covered its expenses anyway and it would not gain as much traffic from its competitor at the second point as it lost at the first.

The above abortive attempts to co-ordinate failed because of labor payment rulings in one case, a tendency to horse trade rather than co-operate in the second, and because the suggested swapping of abandonments worked out unevenly in the third.

As to labor complications, the Washington Agreement, which is often blamed for preventing co-ordinations, is probably not much of a factor. Schedule rules and seniority districts, etc., and general labor disapproval undoubtedly are among the important barriers to co-ordination. This is part of a larger problem than co-ordination and the chances of a reduction in these barriers is tied up with the chances for change in governmental attitude toward labor after 1940.

As to lack of co-operation between managements, this factor is certainly not going to change much unless some managements are scared into co-operation by government action. Such action does not seem probable, however. It is unfortunate that in the railroad situation one unco-operative management can so seriously hamper the co-operative efforts of many others. It is also unfortunate that the organization for co-operative effort, the Association of American Railroads, has not been able to inspire more actions of a constructive kind in the area of co-ordination. This organization has no power to enforce and any hopes that it may instigate co-ordination on a larger scale must be based upon the hope of inspired leadership in that direction.

In the third unsuccessful co-ordination example above, the attempts halted when it became evident to one party that it would not seem to have anything to gain and would probably have something to lose in the swap, as was the case in the second example as well. The application of the simple formula of splitting the additional expenses and splitting the savings would help solve most of these cases if there was also some way of allowing for earnings on traffic handed over from these feeder lines to main lines of the parent systems. Arrangement need also be provided for future changes in the traffic coming to or off the lines. It is necessary, however, to give up hopes of increased competitive advantages in the future. A formula which looks toward filling these needs has been worked out by two railroads which are still negotiating to make an agreement on this basis and I shall describe this formula shortly.

While opposition to co-ordination in cases where at least one party is dissatisfied with the *status quo* is great enough, opposition is, of course, much greater in the many cases of potential co-ordination where operating economies on at least a small scale would be possible but where neither company is losing money out of pocket with the present setup. In a great many of these cases, nevertheless, both parties might gain through some arrangement which combined both swapping and pooling. In those cases where a co-ordination calls for a definite sacrifice on the part of one road for the "benefit of the railroads of the country as a whole," as is often urged, the opposition of private management is natural and well founded. The officers of a railroad company are appointed to make the property pay a return on the investment. In addition they are legally restricted from making agreements which obviously impair that investment. Whether this is wise or not as a part of our economic system is outside the scope of this paper. But the action of a railroad president who refuses to co-operate in a co-ordination which is to the detriment of his stockholders is a symptom of the working of the institution of private economic enterprise. It is a natural and, I think, a perfectly healthy symptom. I personally believe that private economic enterprise is in the public interest and that part of the price we must pay for it is the lack of co-ordination which we might otherwise have. I conceive of enforced large-scale consolidation as a better way to gain economies than co-ordination since we can have both large savings and private enterprise.

The formula mentioned just above applies to a proposed co-ordination where one road parallels another for approximately 100 miles and then turns away up a valley to a terminus 50 miles beyond. The road which is paralleled is part of a through line. A good sized city is at the other end of the 100-mile duplicate track. There is not sufficient traffic to justify use of the two roads as a double track. The managements of both roads appear to be sincere in a desire to co-ordinate if possible and the proposal has been to abandon the 100 miles of track on one road and have the other road lease the 50-mile branch up the valley. Other possibilities would have been trackage rights over one line, with resultant useless duplication of train miles, or bridging—having one road carry the cars of the other for its account. The law department of one road believed the ICC would not approve the latter arrangement, however, since it splits responsibility and transportation.

This co-ordination project would normally have failed to progress toward fruition because of three factors: (1) the system revenue from the line to be abandoned and the branch line showed a net return after out-of-pocket costs of carriage on the system; (2) the traffic department of that road did not want to give up the possibilities of future traffic development in the branch line territory; and (3) both coal and oil and ties for railroad

use came off the branch line and were carried without freight charges to other parts of the system. The first of these factors merely tends to reduce incentive; the other two are real problems.

The plan calls for operation of the branch line by the second road, the one with the through line, and arranges to make a pool territory out of the branch and that part of the second line which parallels the track to be abandoned. All system revenue accruing to either system from all traffic originating or terminating in pool territory and all revenue from traffic originating or terminating on new branch lines or extensions which may be constructed at joint expense is to be pooled regardless of direction of movement or on which system it moves after leaving pool territory. The remaining operating company in pool territory is to become pool manager and distributor of the pool earnings but access to accounts is open to the other company. The operating company pays to the withdrawing company a percentage of the total gross pool revenue. This percentage is found first by taking one half the loss which the withdrawing road would suffer and adding one half the gain which the operating road would obtain (thus getting an estimated payment from the operating road to the withdrawing road) and relating this total to the gross income. In other words, for a trial period the gains and losses would work out at a given sum which is say 30 per cent of the gross revenue. This 30 per cent of gross becomes the annual payment from one road to the other. In addition, the operating road agrees to pay the other road, when the latter carries pool traffic on its system, 45 per cent of the division which would have accrued to that system—to cover its out-of-pocket costs.

Thus, although one road has withdrawn from a territory in which it had traffic influence its net earnings are actually better than before if the traffic remains the same, while, if it increases, this withdrawing road participates in the increased income, even though no traffic touches any part of the latter line's system.

Arrangements are made for changing the percentage in case of change in the size of one of the systems through consolidation, etc., but not through abandonment. Savings in taxes, major expenses due to acts of God, and payments under the Washington Agreement are all to be split half and half. The problems and prohibitions so often raised because of underlying mortgages on lines to be abandoned are fortunately not an important factor here. The problem of what to charge for carriage over pool tracks of company material for the withdrawing line, which not only would receive oil, coal, and ties from pool territory but owns the large tie plant on the branch line, was worked out by charging full freight rates to the interchange point for the commodities carried. The increased cost to the withdrawing line (the difference between the full freight charges and the out-of-pocket costs of carriage under the previous "free haul" operation over its

own line) is somewhat offset by the percentage participation in the pool income from this traffic. It is possible that the ICC might object to this arrangement since in a way it resembles a kind of "rebating." Certainly it is unlike the abuses because of which rebating was made illegal. No other arrangement could be worked out, however, which did not so detract from the practicability of the plan to the withdrawing road that the co-ordination would have been blocked on this difficulty alone. It is to be hoped and expected that the ICC will look upon such situations in the light of the desirability of making voluntary co-ordination as a whole easier, not in the light of a strict and narrow interpretation of law.

The one problem still being negotiated has to do with what arrangements shall be made if the pool revenues fail to cover the percentage payments, the out-of-pocket cost of handling pool traffic beyond the branch line, and the actual cost of operating the branch line. The operating road would like to arrange to have the withdrawing road make up such loss and if the latter road desires, then abandon the line. The latter road, however, wants to preserve the right in such a case to have trackage or bridging rights. So the matter now stands.

Stress has been laid on this plan since it goes several steps beyond the more simple halving of gain plus loss of the trackage agreement type and it offers balm for the road which withdraws from a competitive territory. It seems possible, for instance, that some similar attack on two of the described unsuccessful attempts at co-ordination might bring success and savings. This pooling plan has been at least two years in conference. It was thought about fitfully for ten years before that. It is complicated, although it is short and simple compared with the Northwestern-Milwaukee pool agreement which covers ore movements into Escanaba. It is a good example of two things: first, that when you see an obvious case of duplication it may not be a simple thing to remedy it; and, second, where there is time and a great deal of perseverance it can often be done. Because of the need of these two things, however, it more often is not done, unless the savings appear very sure and very large.

Before summing up our treatment of railroad co-ordination I should say a word about terminal co-ordinations. There is undoubtedly considerable opportunity for savings taking the country as a whole, but there are many important forces which militate against it. Among them are that taxes may continue on much of the abandoned property and greatly cut down the savings and therefore incentive in many cases; lines with a superior terminal have no desire to let a competitor take advantage of it (offsetting situations in separate cities seems the best way to handle this, but circumstances do not often neatly fit this kind of arrangement); and any large-scale co-ordination of the terminal facilities of competing carriers involves the complicated problem of dispatching and breaking up competing trains in the

same yard. When there would be several roads all offering overnight service between two cities and all used to having their trains leave town at the same time, with little or no leeway in their schedules, the situation would become extremely complex. The answer appears to be that it is not very feasible to have the co-ordination unless you get a pool arrangement out over the line, too. Such arrangements seem to me desirable but again consolidation appears to be a better way to do it.

Besides the study of the Prince Plan, mentioned in Part I of this paper, the Federal Co-ordinator of Transportation had many studies which attacked the savings problem by categories rather than systems. Studies were made of terminal co-ordination projects and savings were estimated at between 25 and 50 million dollars.[12] Savings through car pooling on a nation-wide scale were estimated at almost 100 million dollars,[13] by passenger traffic solicitation co-ordination at about 15 million,[14] and by merchandise traffic co-ordination at savings possibly as high as 100 millions.[15] In general the railroads did not agree as to the amounts which could be saved through such broad co-ordination.

When I summed up my ideas as to the barriers to consolidation on a large scale I said there was opposition from labor, local interests, government, and management. Labor and local interests seemed most important. When we look at the barriers to co-ordination we find that the attitudes of labor and management are more important than the others and I believe that attitude of management is the main barrier here. I do not look upon this, however, as a wholly undesirable phenomenon. To the degree that such opposition is based upon a non-co-operative spirit where mutual benefit is possible it is unfortunate; to the degree that it reflects the careful preservation of the existing competitive advantages of a company owned by a group of stockholders, I believe it is justified and I believe it is desirable. I do not mean that I think management should not investigate with care the possibilities of long-run benefits in spite of apparent short-run concessions, or that management should not extend itself to the limit to discover ways of attaining mutual benefit in cases where simple swapping or the simple application of halving the net savings does not suit both parties. I think more effort is expended in these directions, however, than many people give the railroads credit for.

Lastly, what can be done, or more exactly, what do I hope will be done along these lines to reduce the cost of the manufacture of transportation? I hope that in the absence of enforced co-ordination on a larger scale some

[12] *Report on Economy Possibilities of Regional Co-ordination Projects,* Fed. Co-ord. of Trans., Feb. 14, 1935, p. 11.

[13] *Report on Freight Car Pooling,* Section of Car Pooling, Fed. Co-ord. of Trans., Oct. 23, 1934, p. 3.

[14] *Passenger Traffic Report,* Fed. Co-ord. of Trans., Jan. 17, 1935, p. 59.

[15] *Conclusions of the Fed. Co-ord. of Trans. on Merchandise Traffic,* May, 1936, p. 8.

managements will continue and others begin to prosecute co-ordination projects, but I do not believe the result will importantly affect annual net income of the railways of the United States. I hope that in the absence of enforced consolidation on a large scale the ICC will base its consolidation decisions on a broader concept than it did in the Associated Railways case, that Congress will relieve the Commission of the need of having consolidations conform with its plan of 1929 and of preserving competition as fully as possible and the need of maintaining wherever practicable existing channels of trade and commerce, and that labor (although this is highly improbable) may somewhat soften its anticombination attitude. In addition, I sincerely hope that the Association of American Railroads will somehow inspire more co-ordinations and consolidations than it has done in the past. These are all hopes which I have little reason to believe will come true. Lastly, I believe that Congress now has the power to enforce consolidation into a limited number of systems regional in character, that such consolidations would result in savings of at least 200 million dollars per year, and that Congress should overlook labor and local pressure upon itself and pass such legislation. Because of the reasons stated throughout this paper, this, too, is only a hope. I do not expect it to happen.

DISCUSSION

C. S. DUNCAN: Commissioner Eastman, like the jesting Pilate, has propounded his question without stating the answer.

As I see it, he presents to the members of this Association a crucial problem of the day in this simple inquiry: "What is a minimum reasonable rate?"

The Commissioner has set forth three theories, somewhat vaguely defined to be sure but capable of statement:

1. A reasonable minimum rate is one which covers "out-of-pocket expense" of hauling the traffic, with some margin over.

2. A reasonable minimum rate is determined by "the full allocated cost of service," which would include also a fair return on the value of the property used in rendering the service.

3. A reasonable minimum rate cannot be determined by formula but it is a matter of judgment and discretion on the part of the regulatory body so to adjust the rate as to prevent destructive competition, promote the use of the most economical agency, and stabilize and improve the financial conditions of the transportation industry.

There is clear indication in the statement by the Commissioner that, in his own mind at least, the correct and clearly defensible principles have not yet been established. This is a period of experimentation. We are in the process of working out such principles.

Not only are there cases now pending involving this question of a reasonable minimum rate but recently cases have been decided which involve all of the elements. Perhaps more significant than any other is the recent case decided by the Commission on September 25, 1939 (I. & S. Docket No. 4614) involving the transportation of petroleum in the states of Washington, Oregon, Idaho, and Montana.

In this instance, what did the Commission say in regard to a reasonable minimum rate? Here is one point that is pertinent: "It should be kept in mind that we are not here fixing reasonable maximum rates for river-truck routes, which would have to be based on all costs, but are trying to determine what incentive the rail lines must afford the California refiners to create that equality of opportunity which should fairly apportion the traffic between rail lines and the river-truck routes." In my opinion, the phrase "fairly apportion the traffic" is most significant. The rate proposed by the railroads from north coast points to the Inland Empire was 25 cents per hundred pounds. With respect to this rate the Commission found that "it is apparent that the proposed rates are compensatory, considering all costs." Again they said, "To the most important destination point, Spokane, the evidence justifies conclusions that the proposed rail rate of 25 cents from north coast ports would yield some margin over full costs." The proposed rate by the Great Northern of 25 cents per hundred pounds from the Montana field was found to be "not merely compensatory, on the so-called 'out-of-pocket' basis, but high enough to cover all costs and yield substantial profits."

Was this rate of 25 cents a hundred a reasonable minimum rate? The Commission said it was not and ordered the proposed rate canceled without preju-

dice to a rate 3½ cents higher. What is the argument for upping the rate that had been found by various factors to be a reasonable minimum rate? I think the answer lies in the phrase to which I made reference, "fairly apportion the traffic." In this outstanding case, therefore, the Commission, using its judgment and discretion, has undertaken by means of a minimum rate adjustment to divide the tonnage among the various agencies.

Granting, however, as the Commissioner does, not so clearly in this paper but elsewhere, that there is a surplus of transportation agencies and such a surplus that available traffic is not sufficient at any allowable level of rates to support them all, what is solved by dividing and subdividing this traffic and these revenues among various agencies?

My humble suggestions for the consideration of the Commissioner and his colleagues are as follows:

1. It is the duty of the Commission to direct the attention of Congress and the public, forcefully and persistently, to the underlying situation which the Commissioner says has not been committed to the Commission for determination and consideration; namely, the development of transportation facilities by public expenditure, public aid, or subsidy.

2. To meet this underlying situation the Commission should ask for and be given the same authority with respect to certificates of public convenience and necessity for the construction of waterways, highways, and air routes for commercial purposes as it now has for railroads.

3. The problem of the private carrier, or one hauling his own commodities in his own conveyance, made possible by public expenditures alone, can be met in only one effective way. The railroads at one time were private carriers of this sort. They handled their own coal over their own tracks in their own cars, for commercial purposes. This seemed to be unfair for a public service carrier to do. Congress thereupon passed a Commodities Clause forbidding the railroads to haul in commerce the traffic which they own. A provision has been proposed, and it should be adopted, to extend the Commodities Clause to all transportation agencies.

4. The Commission should not continue to deal with the question of the minimum rate with respect to individual commodities on the theory of fairly apportioning tonnage. Sooner or later the Commission must pass judgment upon the general usefulness of each agency.

Dr. Morgan was too, too successful in accomplishing one purpose he had in mind; namely, not to tell us the findings as to public aid resulting from his extensive study.

Let me state at the outset how far I can go in agreeing with Dr. Morgan. I agree that there are surplus facilities and that they are due to uneconomical government expenditures. I agree that pressure groups have largely achieved this, that lack of financial responsibility for the great fixed investment in roadway makes it easy to enter the field of water, highway, and air transportation. I agree that so-called "multiple use" has complicated the problem of cost, that public expenditures have made possible a rapid development, technologically, in motors, airplanes, and barges, and that the private carrier is creating a vexing problem.

I agree with the principle of annual cost, including interest and taxes. As to taxes, however, they should not be considered merely for the purpose of ascertaining comparative costs, rails versus highway, water, and air, but rather on the basis of a fair contribution by commercial agencies in these fields to the support of a common government. I am concerned here also with the statement that "except in a very special and limited sense, taxes are not a cost, however, and should not figure in the determination of public aid." I consider it a public aid for an agency to be relieved from taxes and particularly is this so when its competitor is burdened with taxes, even to provide a roadway for the tax-relieved agency.

Discussion of "benefits" is a bit vague to me. The point is well taken that a direct comparison between estimated boatman's charge with corresponding rail rate fails to consider interest and taxes to government embedded in the rail rate. What I do not find, however, is reference to the fact that the receiver of the benefit in water transportation is not the payer of the costs of furnishing the waterway. This is certainly pertinent to a discussion of government aid or subsidy.

I want to take up briefly the subject of the public utility concept of highways which Dr. Morgan imputes to the railroads and for which idea I will assume full responsibility.

First of all, Dr. Morgan claims that the public utility concept of highways as developed by the railroads has had no real test in a court of law and has been accepted by no official agency speaking authoritatively for the general public interest. The question, he says, is still in the field of debate. Let us see.

In the District Court of the United States for the Seventh District of Illinois, Southern Division, *Brashear Freight Lines* v. *Hughes*, the court did speak on this very question. Therein the court says: "The highway system owned by the state and its subdivisions is a public utility supplying facilities which constitute an actual monopoly which is subject to inter-governmental regulation and control. The annual cost of operating such utility should be determined in the same manner as for a privately owned public utility." Dr. Morgan is in error. The court has spoken. The State Highway Department for Illinois has spoken in the same language and ostensibly in the general public interest of that state. The State Highway Department in Missouri has also spoken in the same way.

As I understand it, Dr. Morgan thinks that this whole problem is one of degree, whatever that may mean. I assume the meaning to be that highways are in part public utilities and in part not. My endeavor to find the dividing line from what is said in Dr. Morgan's paper leads me to the conclusion that the main highways may be considered in whole or in large part as public utilities but not so as to city streets and other rural roads. These do not, taken together, constitute a system, he implies, but must be broken apart and treated differently. The basis for the division which apparently he would make is length of haul, which distinguishes local use from intercommunity use.

Length of haul is no basis for determining what is a public utility or what is not. The figures cited by Dr. Morgan of 37 per cent of one-way trips less than 5 miles outside the city, 64 per cent less than 10 miles, 84 per cent

less than 20 miles are wholly beside the point. Streetcar lines have had a shorter haul but they are public utilities. In 1890 the average passenger ride on individual railroads was 24 miles but railroads were public utilities. In 1937 the average ride was 49 miles. Railroads have handled an immense commutation traffic for years, a short-haul ride, a community service, but they hauled these people as public utilites. Branch lines are a part of the public service corporation. We have railroads in the country 2 miles, 5 miles, 10 miles, or 20 miles long, but all are public utilities.

Certificates and permits are granted to truckers "to all points" in as many as five or six states. Permits are granted for truck operation within a radius of 10, 20, 50, 100, and 150 or 200 miles around certain trade centers. Permits are granted over irregular routes and unnumbered highways. The fact is that trucks go where there is traffic, if the way is at all passable. Drivers of passenger cars upon the highways find trucks wherever they go. Surely it cannot be reasonably denied that the motor vehicle has removed the local use concept from our highways and streets.

I still wonder why Dr. Morgan insists upon some other concept than public utility to be applied to highways. My concern here again is that he is on the point of giving away substantial public funds on some nebulous theory of social benefits. Is there something in his definition of government aid, as distinguished from subsidy, for which he is laying the foundation in attempting to separate highways and streets into different categories? Of that one cannot be certain until Dr. Morgan unlocks the door and permits the dark secret to come forth. We want to know what his findings are, whether or not they are along consistent principles and, particularly, whether he is going to shift to the shoulders of the general taxpayer an important part of the costs for highways, airways, and waterways which should be borne by the users.

I offer now this challenge to him that, if he seeks to justify government aid as a policy and refuses to call it subsidy because of certain intangible but valuable social results, then I can match every social good of highway and air and waterway with an equal and greater social good contributed by the railroads without being paid for it.

HERBERT E. DOUGALL: If the concept of public utility had developed one hundred years earlier, and our transportation system had grown up within well-defined rules governing the respective roles which the public interest and private investment should play in providing transportation service, the present differences of opinion as to the proper extent of regulation and public aid might not be so violent. Regulatory bodies are now trying to superimpose a belated authority on both new and old participants in the strife. When one views the attacks made by one agency of transport upon the others, and by all of them on the regulatory tribunals, one sometimes wishes we had never effected a compromise between public and private interest in this country. One gets a little discouraged in the face of the never-ending argument waging around the questions of the proper scope of regulation and the "fairness" or "unfairness" of public aid to private transportation. Yet the argument must go on until it is reasonably solved. The papers presented at the meeting take us that much further towards

the solution. A few points raised in the papers deserve particular attention.

One of Mr. Eastman's main points is that adequate regulation of the charges of competing transport agencies must rest on the determination of reasonable minimum rates, and that cost of service is likely to be the best criterion of the correct minima, however that cost be determined. We should recognize, however, that any rate making on a cost basis must take into account all costs, both public and private. The Commission cannot overlook the degree of and effects of public aid or subsidy given to the various agencies, much as it might wish to avoid having to pass judgment on the extent to which that aid is unfairly given or unfairly withheld. And now that the shipper or traveler can provide his own transportation facilities, at least in part, the minimum rate charged by the public carrier will have to take into account the alternative cost to the user. This cost may appear to be lower than it actually is when all proper items are included. Thus the regulatory body is again faced with the question of public versus private investment.

Mr. Morgan's paper gets right to the point—how should real cost be calculated? What items should be included? Special factors have served to encourage greatly both public and private investment in transportation facilities in recent years. The first step is to determine what the facts are respecting public aid or subsidy. Unfortunately, the several studies of highway cost which have been made in recent years have not convinced anyone but those to whom the results are favorable. I am not sure that the findings of a fact-finding group such as Mr. Morgan has in mind would be any more acceptable to the "injured" parties than would those of previous studies. But at least there would be a logical basis for future action.

Nor should one hold up his hands in horror at the word subsidy. There never was a form of organized transportation which did not, at least in its developmental stage, depend heavily upon public aid. The question is, what form should the aid take and how long should it be before the transport agency can be expected to stand on its own feet?

Closely allied to the foregoing question is the matter of outlived investment usefulness. Capital (public and private) invested in transportation has a way of becoming obsolete or outworn. It is not easy to recognize this and write off the superfluous investment. Although, as Mr. Eastman points out, most of the regulation since the war has been designed to protect the carriers, it is equally true that no investment need be forever supported after its usefulness has been outlived. Dead capital is dead capital.

The trouble with applying this notion is in determining when the capital is dead. The railroads complain that they are not being given a square deal (one regrets to see a noble industry reduced to calamity howling) and that if all agencies of transport were treated consistently and uniformly they could give a good account of themselves. It would be a great satisfaction if there could be common agreement on the need for investment in transportation facilities before the investment is made. After it is made very strenuous efforts are made to preserve it and all sorts of arguments are advanced for maintaining it.

Wholesale consolidation into a small number of railway systems would go

far towards demonstrating the usefulness of much of the present investment in railroad facilities. Professor Baker has brought out clearly the main reasons why progress has not been made along this line. An additional obstacle to consolidation on a grand scale might be mentioned: the very great practical difficulty in satisfying the multitude of investor groups whose interests would have to be reconciled. The fact that little progress is being made in reorganizing individual carriers under the remedial amendments to the Bankruptcy Act suggests how very difficult it would be to get any agreement on a plan of consolidation involving several railroad systems, unless extreme pressure could be brought from above.

The arguments for consolidation might apply with equal force to the electric light and power industry, the steel industry, and others in the "heavy" group. Is there any special virtue in abandoning our antitrust legislation only so far as railroads are concerned? It may well be that the extra costs and waste involved in running our present semi-competitive railway system are but a part of the price we pay for preserving some compromise between complete private monopoly on the one hand and government ownership and operation on the other.

C. S. MORGAN: Dr. Duncan states that my paper makes no reference to the fact that "the receiver of the benefit in water transportation is not the payer of the costs of furnishing the waterway." On the contrary, the point is made twice in a single paragraph.

I am well aware of the decision in the *Brashear* case and of the state reports which Dr. Duncan mentions, but, considering the nature of the proceedings which called them forth, statements made in the reports, and the impossibility of appeal from the decision on the record as made, I do not consider that any definitive acceptance of the "public utility" concept is to be found in these quarters.

Dr. Duncan's discussion of length of hauls entirely misses the point I had in mind. I merely show that, considering the shortness of the average car or truck trip outside of city limits, there can be no "system concept" such as is necessary if the validity of the public utility concept of the railroads is to be established. The fact that privately organized undertakings which furnish service over short distances are public utilities has no bearing on this point, and the same may be said as to Dr. Duncan's data respecting the number of truck trips of a hundred miles or more and the average length of certain truck movements. These movements occur preponderantly on the state, including federal aid, highways, as to which there is no great difference between the position of Dr. Duncan and my own. However, these data do not overcome the fact that only 2 per cent of all truck trips outside city limits involve distances of a hundred miles or more or that the average length of all truck trips outside city limits is only 17.4 miles (median, 8.1 miles). The use of trucks, as well as that of passenger cars is, as I state, so essentially local as not to lend itself to the needs of the "system concept."

PRESERVING COMPETITION VERSUS REGULATING MONOPOLY

CAN THE ANTITRUST LAWS PRESERVE COMPETITION?

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In recent years it has become fashionable in academic and, to a lesser extent, in business circles to assume that the competitive system is on its way out. With some persons this opinion springs from wishful thinking based upon their allegience to alternative types of organization ranging all the way from unsupervised private cartelization of industry to a collectivist economy. Others come reluctantly to the belief that competition is passing and regard the decline of competition as the source of problems and dangers which they would gladly avoid. This paper is not intended to discuss the issues between these groups. It is addressed to the belief both have in common, that whether we like it or not, competition is doomed. It is an attempt to assess the chances that the dominant American sentiment for continuance of the competitive system can be made effective.

But even of this problem I shall discuss only a part. Preserving competition by law depends not only upon the effectiveness of the antitrust laws in implementing the antitrust policy but upon the scope and direction given to a variety of other policies by the laws which implement them. The policies toward exploitation of the public domain, tax and inheritance policies, the nature of the supervision of corporate finance and of investment banking, the character of the patent system, the breadth of the area which is deliberately removed from the competitive field in order to be publicly regulated: these and many other matters of law, federal and state, must help determine the further importance of competition in America. It is conceivable that the antitrust laws might preserve competition wherever they are given a chance to operate but that the policies expressed in other statutes might progressively reduce the competitive area until competition became a vestigial matter like the vermiform appendix. Conversely, the antitrust laws might fail in much of their task and yet other public policies might go far to shorten the lives of monopolistic aggregates of capital and to set up new generations of small competitively-minded independents. My subject is limited to the antitrust laws and time does not permit stretching it. Hence I can discuss only the extent to which these laws can preserve competition within the area which the community may regard as their proper field of operation.

Doubt of the efficacy of the American policy toward monopolies and unreasonable restraints of trade has been due chiefly to the industrial history of the last fifty years. Doubtless economists have been predisposed

to believe that competition was collapsing because the neoclassical theory of competition, which had once been regarded as a sufficient tool of economic analysis, was obviously doing so. But events around them supported the belief. In most industries corporate units grew in size and declined in number until industrial giants like those which caused alarm in 1901 came to seem commonplace.

Size means concentrated financial strength. One per cent of the manufacturing corporations have been estimated to have 63 per cent of the total wealth of all such corporations. In 1935 the two hundred largest manufacturing corporations produced more than 17¼ billion dollars' worth of goods, nearly 38 per cent of the total value of manufacturing production.

Size means also a series of oligopolistic markets. The largest four producers produce more than half of the total product in 3 industries of major size, 6 industries of medium size, and 28 industries of small size. The largest eight producers make more than one half of the output in 6 large industries, 13 medium sized industries, and 117 small industries. Since these concentration figures are based upon the census classification of industries, each so-called "industry" includes various products which may be made by different concerns. Hence the concentration in the control of products sufficiently alike to compete against each other in the market must obviously be higher than these figures indicate. Moreover, many commodities which are not sold in national markets must be more highly controlled in quasi-autonomous regions than in the country as a whole. Although we cannot state in quantitative terms either the concentration by regions or the concentration by individual commodities, it is clear that the figures, if available, would further strengthen the view that oligopoly has become prevalent.

With the growth of big business have come price policies similar to those which economists have traditionally called monopolistic. The price leadership of large concerns may establish a unity of action the effect of which is scarcely distinguishable from the effect of a collusive agreement. Where there are several large concerns, each may be convinced that price cutting will invoke retaliation and that the result will be lower profits for all; and consequently their individual price policies may establish rigid prices at a high level. For convenience I shall refer to this situation as group monopoly. In maintaining such price policies members of an industry may set up systems of pricing in accord with a formula similar to the well-known basing-point systems; or they may develop a cost accounting orthodoxy coupled with a habit of basing price policies upon costs. Such trade practices, once established, may function as smoothly as the cruder forms of old-fashioned price conspiracy. A series of such developments in various markets has contributed to uniformity and rigidity of prices and periodical idleness of productive resources, indistinguishable from the results of more

formal collusion; and yet these ways of pricing have appeared to be inherent in the nature of things in a sense in which crude collusion is not.

Along with this development of monopolistic structure and monopolistic price policy has come a tendency to legalize practices which have been contrary to the antitrust laws. I do not refer to the removal of specific industries from the competitive field, but to broad grants of permission to do what was once forbidden. The most conspicuous of such grants in recent years was under NRA, which authorized the setting aside of the antitrust laws in order to permit industrial groups to operate under codes of so-called "fair" competition which in fact were intended to restrict and regulate competitive practices and even to substitute group control of prices and output for competition. Under other statutes, systems of price fixing and production control over agricultural commodities were authorized. Though such legislation was avowedly intended to meet an emergency, and the NRA portion of it was quickly terminated, the setting aside of competition by law has continued, largely through the state governments. Nearly all of our states have made it possible to abolish by private contract price competition among distributors of identified products. Nearly a third of our states have adopted requirements limiting the freedom of distributors to reduce prices below some figure which is taken more or less arbitrarily to represent cost. Other statutes, less general, have conveyed even more sweeping powers. The California agricultural marketing act, for example, permits the state director of agriculture, with the assent of 65 per cent of the producers and 65 per cent of the handlers, by volume, to limit the quantity of any agricultural commodity processed, to allot the amounts which may be purchased by distributors, to apportion the quantities which each processor may process, to establish reserve pools of the commodity, and to apportion the proceeds of the sale of such pools.

Thus the doubts about the future of the antitrust laws have been based upon an increasing size of the business unit, carried so far as to give many concerns a quasi-monopoly position; upon the development of price policies, many of whose effects are like those of collusive pricing; and upon legislative tendencies to sanction price and production controls. Some have drawn the conclusion that the principle of monopoly has won in the market in spite of public efforts to destroy it, and that the victory is in process of being recognized at law. Since all victorious economic systems create their own philosophies of history and of justification, it is not surprising that many who take this view think that the monopolistic trend is inherent in modern technology and modern wide markets and that it is justified as a means toward technological efficiency.

I do not believe these theories of inevitability nor of beneficence. During most of the development just sketched the antitrust laws did not fail but went by default. As the present assistant attorney general, Thurman Ar-

nold, has pointed out, the great trust-busting campaign of Theodore Roosevelt was conducted with 7 lawyers and 4 stenographers. In 1933 the Antitrust Division had a professional staff of only 26. When Mr. Arnold took office in March, 1938, this staff numbered 59. Even today, there are in the Antitrust Division only 190 lawyers and 17 experts. During most of the Antitrust Division's history, one or two major cases have been more than sufficient to absorb the entire time of the personnel, and today it would be easy to use the whole staff in the prosecution of restraints upon housing alone. Indeed, 27 per cent of it is being so used. The simple fact has been that until recently no broad effort could be made to enforce the law for lack of people to do the work. Even now the staff is less than a fourth of that found necessary to administer the securities acts and about one seventh of that which administers the Interstate Commerce Act.

This fact, more than any other, accounts for the past lack of vigorous enforcement, which in turn tended to bring the law itself into disrespect. Charles Stevenson, head of an industrial engineering firm in New York City, now under indictment for violation of the Sherman Act, expressed the point of view which necessarily arose under such circumstances in the following words:

> Practically, under the Harding, Coolidge, and Hoover Administrations industry enjoyed, to all intents and purposes, a moratorium from the Sherman Act, and, through the more or less effective trade associations which were developed in most of our industries, competition was, to a very considerable extent, controlled. The Department of Justice acted with great restraint and intelligence and only enforced the Sherman Act against those industries who violated the laws in a flagrant and unreasonable manner.[1]

A further consequence of the limitations of staff was the fact that until recently the Division could not proceed toward clearly conceived economic objectives. Cases were necessarily sporadic and isolated—an average of only about eight or nine a year, including all duplications, during the life of the antitrust laws. It was impossible to bring a considerable number of cases simultaneously, and hence impossible to envisage the monopoly problems of a major industry as a whole and deal with them in a co-ordinated fashion. Since a single court proceeding cannot be broader than the group of conspirators against whom it is directed, the inability to bring numerous cases necessarily resulted in attacks upon isolated groups, without regard to the industrial setting in which they found themselves. Such administrative action was not likely to keep the public keenly aware of the constructive possibilities of the antitrust laws. Rather, it provoked in thoughtful people feelings of futility. Thus it fostered a political environment in which the demands of pressure groups, particularly those representing small and precarious business, for special legislation in their behalf might be

[1] Charles A. Stevenson, *Price Control and Allotment of Business* (address before the Annual Convention of the National Association of Cost Accountants, Cleveland, Ohio, June 26, 1934).

granted without serious thought about the effect of such laws upon competition.

This procedure of sporadic prosecution may be contrasted with the present procedure of the Antitrust Division's building campaign. Convinced that the removal of a single restraint upon building at a single point will do nothing appreciable to lower building costs and will have no appreciable economic effect upon the operation of the industry, the Division has investigated and is now prosecuting simultaneously restraints which run all the way from the manufacturers of the various building materials, through the distributors and the various types of contracting organization, to labor in various trades on the construction site. To give these proceedings nation-wide effect, grand juries are now sitting in eleven cities and some form of investigation is under way in a still larger number of other cities. So broad a program provides an opportunity for a simultaneous breaking up of restraints throughout the industry, and consequently an opportunity for housing costs to come down and for vigorous competition to become a dominant influence in the construction of houses. The breadth of the program, indispensable for its economic effect, has meant likewise a favorable reception from the building industry itself such as would never have accompanied helter-skelter prosecutions. Many organizations in the building industry have declared their hearty support for the program, and only two have been openly hostile. Indeed, individuals and groups who knew that they were themselves in danger of prosecution have repeatedly offered cooperation and urged the Department to proceed, because they believed that their personal risks were worth taking if the broad industrial result could be achieved.

A third weakness in the law's attack upon monopoly has been at least partly due to this same lack of enough people to prosecute vigorously. There are a number of important blind spots in the law, areas of industrial action whose legal status has not been authoritatively determined. It has been only natural that a limited staff, unable to handle the cases brought to it, has given preference to the clear-cut violations concerning which the attitude of the courts is known. The absence of prosecutions in other cases has given business a sort of squatter's tenure of the ground, and has resulted in widespread adoption of the questionable but unlitigated methods of achieving market control.

One of these blind spots is the use of del credere agents to establish control over a market. Manufacturers anxious to control the prices of potential competitors or of distributors sometimes make agreements with such concerns by which they hope to secure most of the benefits of transferring risk to the purchaser and yet retain the legal right to control the prices at which the purchaser resells. Many of the problems involved have never been raised in prosecution. Hence, it is impossible to say to what extent

agencies may be legally used to induce rival manufacturers not to compete, nor to what extent modified systems of agency will be treated as subterfuges designed to accomplish unlawful control over resale.

Again, many issues along the boundary between the patent laws and the antitrust laws have never been brought to trial. Patents are being used to allocate markets to particular enterprises, to set up systems of production control, to control the terms of sale of products, to erect an elaborate control of the price of a finished product upon a basis of some small patented detail of the product, and to develop contracts which have the effect of extending controls like those just mentioned, not for seventeen years, but for two, three, and four times that period. A federal grand jury has been called in New York to consider many of these problems with a view to prosecutions designed to prevent the abuse and undue extension of patent privileges.

Perhaps the most important of the blind spots is the legal status of mergers. In the Clayton Act the Congress forbade the acquisition of stock in a competing corporation where the effect might be to lessen competition between the two companies involved. In a series of court cases this provision has been interpreted in such a way that the prohibition of the Clayton Act prevents substantially nothing except what was already forbidden as an attempt to monopolize by the Sherman Act. Meanwhile, partly to evade the Clayton Act, the importance of stock acquisition in uniting competing enterprises has been greatly diminished and mergers by acquisition of the assets of competing concerns have become the outstanding methods of eliminating competitors. Nevertheless, there has not yet been a clear-cut judicial test of the question whether a contract to acquire the assets of a competitor may be interpreted as a contract in restraint of trade. And yet the answer to this question must determine whether we have in the present law any means of preventing the continued reduction of the number of competitors and the continued growth of the scale of big business by a process of buying up rival plants.

This sketch of the history of industrial development and of antitrust law enforcement seems to me to emphasize two conclusions. The first is that if we seriously want to enforce the antitrust laws there is no reason why the record of the last fifty years should in itself make us doubt our ability to do so. Until a sustained attempt with an adequate personnel has continued long enough to clarify the law and to demonstrate its impact upon the economic environment, opinions on this matter must be based upon analysis rather than experience. The second conclusion is that the politico-economic temper of the American people must be appraised as the first step in predicting the success of the antitrust laws. Unless one assumes that the public wants the antitrust laws enforced and wants it vigorously enough that the agencies doing the job will be supported with men

and money, one might as well grant that the effort will fail. I shall not attempt to turn this discussion toward political prognosis, but I shall assume as the necessary condition of any further relevant discussion that the recent tendency to enlarge the staff of the Antitrust Division will continue far enough to give us a reasonably adequate personnel. In support of this view there is evidence that the recent growth of the Antitrust Division has been the direct result of the support won by its vigorous enforcement policy. This support has been most conspicuous in the case of the housing program, which represents thus far the high tide of planned and co-ordinated action under the antitrust laws.

Granted the resources to make a sustained and serious effort, can the antitrust laws preserve competition? It is necessary at this point to be precise about what is to be preserved. We have not and probably never had perfect market competition of the kind described by the classical economists, and the preservation of such a state of things is not a practical administrative objective. The competition we seek to preserve must necessarily be in some respects imperfect or monopolistic. In their reaction from the highly artificial antithesis between pure competition and pure monopoly, economic theorists have recently been emphasizing the fact that elements of competition and monopoly appear in all markets; and in their enthusiasm for this limited truth they have provided not much theoretical basis for distinguishing differences in degree. Nevertheless, businessmen who trade in markets and government people who must cope with market behavior habitually use the antithesis of competition and monopoly to express distinctions which they regard as important. They do not have in mind differences in the location of points on hypothetical demand and cost curves under conditions of perfect knowledge. They are concerned with differences in the behavior of those with whom they deal and differences in the opportunities which this behavior presents to those who must cope with it.

By competition I mean merely the conditions that buyers and sellers call competitive. For simplicity, I shall speak of conditions only on the supply side of the market. A competitive market is one in which there are alternative sources of supply. Without such available alternatives, buyers may refuse to buy lest they become dependent upon the future vagaries of one management's price and production policy, as the automobile companies refused to buy aluminum from the Aluminum Corporation. Competition implies also that there are alternatives available in the market in business policies, whether toward price, production, or the kinds of goods and services which are furnished. Those options of policy afford, of course, the most important reason why the buyer wants more than one seller in the market. By shifting his purchases to the concern which offers the most attractive prices and the best goods the buyer can exert pressure. In markets where all producers are united in a common price policy there is no way

of exerting pressure on price. In markets in which they are all united in a common policy toward the terms of sale or toward the characteristics of their products, effective option by the buyer is likewise destroyed so far as these aspects of market transactions are concerned. Hence there may be a sharp distinction between the buyers' influence in two markets, each of which depends for its supply of goods upon the same number of companies of about the same size.

In some markets in which one or two small concerns diverge from the typical pattern of policy, they may do so on sufferance because their dominant rivals have no need to fear their expansion. These cases afford no real alternative of policy for most buyers and thus present only an illusory showing of competition. Alternatives of policy must be either numerous or available from sellers with capacity to survive and grow, if they are to provide competition.

A third characteristic of competitive markets is flexibility of business policies toward prices and other important terms of the market bargain. Reconsideration of price policy in the light of changing conditions, not the least of which is the changing price policy of rivals, provides a basis for experiment and a means for recognizing the impact of the economic environment.

A fourth characteristic of competition is freedom of entry into an industry. The potential competition of new concerns encourages moderate and flexible policies by those already in the market and affords a second line of defense for the buyer if he is not protected by the alternatives already available. It prevents established concerns from stopping progress in order to protect their vested interests. Though the scale of enterprise is so large that in many industries considerable funds and investment banking support are requisites for a new concern, there is an appreciable distinction between industries like cotton textiles, in which new enterprises may rapidly change the whole geographical face of the industry, and industries like the manufacture of aluminum ingot, in which for over thirty years no would-be competitor has been able to get started.

I am concerned here with these basic characteristics of competition rather than the effects which are supposed to flow from competition. The political and business community has long believed that competition in this sense has results somewhat similar to those attributed by classical economists to competition in the classical sense. They have believed that in competitive markets there is a safeguard against exploitative bargains; that the check upon high prices which competition affords promotes a fuller use of existing productive facilities; that free entry into an industry encourages a type of industrial expansion which is likely to establish a better balance in the use of resources than would otherwise exist. The degree to which these beliefs are justified lies outside my present subject.

It involves the question whether many shortcomings of the current economic structure are due to too much competition or too much private industrial control. It involves also a consideration of what alternatives to competition are practicable, and how far such alternatives may be relied upon to establish fair play, full use of resources, and balance in the industrial structure. It is not my task today to argue the relative merits of competition and other forms of directing activity to social use. It is sufficient to point out that nobody wants uncontrolled monopoly power to be in private hands and that the techniques of public control thus far available in democracies are suited to deal with exceptions to the policy of competition, but not to provide general public control of production and prices.

Enforcement of the antitrust laws requires the preservation of alternatives in business policy and the preservation of freedom of entry into markets. The key statutes available to accomplish these ends are the Sherman Act, the Clayton Act, and the Federal Trade Commission Act. The Clayton Act prohibits specific types of behavior: price discrimination which injures competition, tying contracts which prevent customers from buying other lines of goods from rival sellers, the acquisition of stock in competing corporations when the effect is to lessen competition, and interlocking directorates in competing corporations any of which has an owner's equity of a million dollars or over. The Sherman Act forbids, in general terms, monopolies, attempts to monopolize, and combinations in restraint of trade. The Federal Trade Commission Act forbids unfair methods of competition and unfair acts and practices. Except for the limited provisions of the Clayton Act, the policy of preserving competition is expressed in broad phrases which describe the results of business action rather than the action itself. The prosecuting agency and the courts are left free to determine in each case whether a line of business conduct falls within the prohibitions of the acts. Such statutes are flexible. They are broad enough to cover new types of business behavior and to take account of the changing economic significance of old practices. On the other hand, since their exact meaning must be developed case by case, this meaning depends upon the insight of the prosecuting agencies and of the courts. Judicial interpretations may extend or limit the content of the statutes in ways which laymen find it hard to understand. Prosecutions which do not dig into the economic facts may give the courts no adequate information upon which to determine the reasonableness of business conduct.

Sometimes these characteristics of the law are urged as grounds for belief that it is unworkable. It is quite true that the judicial process is in some ways unsuitable to the working out of broad economic policies. The fabric of the economic commonwealth does not break neatly into pieces at state lines, nor does it divide readily into separate domains of intrastate

and interstate commerce. In handling so broad a problem as the collapse of the construction industries, it is apparently necessary to spend much time and attention upon questions of whether federal jurisdiction over each part of the industry can be established by showing that specific building materials have moved across state lines. Again, a structure of market control often arises by a series of overlapping understandings, whereas in judicial proceedings the boundaries of a single prosecution may be no wider than the boundaries of a single conspiracy. Thus if three companies have agreed to restrain trade and each of them has separately agreed with various other concerns to extend the effects of that restraint, it may be necessary to bring four or more separate proceedings, in no one of which the full pattern may be admissible in evidence. Even in the presentation of evidence relevant to a single conspiracy, the rules of evidence which were developed for personal crimes and torts are misfits as means to bring out the facts of an industrial market. Judicial evidence is that which individuals have done, seen, heard, felt, smelt, and tasted. There are few techniques for bringing before the court broad situations of which no single person has direct firsthand experience. In the prosecution of the aluminum case, for example, the Department of Justice wished to present two pages of import statistics. Under the rulings of the court, which may have been somewhat overscrupulous, it became necessary to present in evidence every statute since 1890 under which the government had collected such statistics, every administrative regulation pursuant to each statute under which the collections had been made, and the original books of record, year by year, which contained the relevant figures. About a week of continuous testimony was necessary to verify a two-page table of aluminum imports. Had it not been possible to demonstrate the authoritative character of these figures, they probably would have been rejected as evidence. By a strange quirk of judicial reasoning, however, a person who had made a considerable study of statistics not admissible as evidence might have been qualified as an expert witness and might have testified as to his opinion, even though it was derived from sources which the court would have rejected as improper.

The judicial process is likewise an awkward means of providing such incidental administrative safeguards as may be needed in the enforcement of economic policies. Proceedings under the antitrust laws often result in equity decrees which prescribe limits for a future course of business conduct or which require the reorganization of business enterprises to terminate a monopoly. In such cases surveillance may be necessary to determine whether the provisions of the decree are being adequately carried out. Since courts are not administrative bodies, the facilities which they have available for such supervision are few and awkward, and in consequence the follow-up of decrees in equity has usually been inadequate.

Finally, the lack of an effective civil penalty in the present laws has enhanced the problems of enforcement. The only choices open to the enforcement agencies are either criminal indictment or else proceedings in equity or by Federal Trade Commission order which, if successful, will involve no punishment for past conduct but only a requirement as to the future. Since equity cases are not punitive, they afford no deterrent. The only way to make lawbreaking hazardous is to indict. In a criminal case, however, the defendant has the benefit of many safeguards with which the law has surrounded criminal actions. The most obvious of these is the requirement that the prosecution establish its case beyond a reasonable doubt, whereas in ordinary civil proceedings a case may be established by the preponderance of evidence, even though the proof is not overwhelming. To prove a far-flung business conspiracy beyond any reasonable doubt is more difficult than to supply such proof of a personal crime. Moreover, juries are unwilling to convict nice people, and the ordinary defendant in an antitrust suit is well dressed, soft spoken, and obviously not, in an ordinary sense, one of the criminal class. The consequence is that the law is both too severe and too lenient. The punishment sought frequently fails to fit the crime, and sensing this fact, the juries sometimes refuse to punish at all. Amendment of the law to provide strong civil penalties as an alternative to criminal action would make punishment more sure and at the same time permit it to be less severe in suitable cases.

Though such procedural shortcomings often handicap the effort to use the antitrust laws for economic ends, the gap between legal process and economic fact creates less difficulty under the antitrust laws than under statutes designed to regulate monopolistic enterprises. The elaborate legal futilities of the utility rate cases have provoked formal comment by a member of the Supreme Court itself. The problems of adapting to broad public purposes a legal structure which grew up chiefly to settle private disputes and punish individual crimes are common to any industrial policy except complete laissez faire. Better legal procedures would improve the working of the antitrust laws, but the need for them would be even more pressing if the laws were abandoned.

Moreover, though the laws need to be a more effective instrument, the administration of the present laws need not, for that reason, fail. Most governmental instrumentalities have obvious defects and function with no more than partial efficiency. As in the case of traffic control, many individual violators may go unpunished, and yet the broad effect of the system may be sufficient to safeguard the flow of traffic. The basic question is whether antitrust procedures can catch enough of the anti-competitive tendencies in modern business to halt or reverse the trend.

One sort of monopolistic tendency of business is easy to deal with. This

is the old-fashioned kind of collusion which, before I joined the staff of an enforcement agency, I thought had gone out of date with the turn of the century. Instead, it is still one of the very prevalent elements of business policy. As in the days of Adam Smith, groups of businessmen get together to fix prices; and they seek to conceal what they are doing by the secrecy of their proceedings. To cope with such efforts is a mere matter of personnel, for there is scarcely a collusive agreement of any size or duration which does not leave unmistakable traces. If there are many persons in the conspiracy, one of them is almost sure to develop a grievance and turn state's evidence. If the plan is complicated, it is almost certain to leave written records. If no letters or memoranda are written, there is evidence that meetings were held and evidence of the identity of action which followed the meetings. If files have been stripped, stray carbons and references to the missing documents in other documents make it possible to trace what happened. Once proved, a collusive agreement is relatively easy to terminate by law, since it operates through a system of joint action which may be stopped.

To prevent collusion is important not only because of its prevalence but because collusion which results in fixing prices is usually the least defensible kind of anti-competitive policy. When monopoly arises by a growth in size, it usually involves a change in the managerial methods of the concern. There may sometimes be gain in efficiency; there is often gain in industrial stability. In such cases a preference for competition is a choice of a balance of good where something may be said on each side of the issue. In collusive price fixing, however, the conspiring concerns are engaged in a crude attempt to get more income without appreciable change in productive methods and with no guarantee of a stable future. Indeed, among the most violent and disastrous of business fluctuations are those which occur when a collusive agreement drives prices too high and the consequent production of an enlarged supply shatters the agreement and drives prices too low.

A much more difficult problem is presented by the unity of price policy which results from price leadership or from group monopoly. In price leadership a large concern so overshadows its rivals that they find it safest and most profitable to surrender independent business judgment and to copy the price policies of the dominant concern. The head of one such small company was asked in a TNEC hearing what would happen if he chose to disregard the prices of his large competitor. He replied, in effect, that he hoped he might never have occasion to find out. When the pressure upon the small concern is a matter of overt threats and of business policies expressly designed to destroy the enterprise, there is a clear basis for action under the antitrust laws. When, however, the small concern's choice is merely between sheltering itself under the umbrella or taking the risks of

market competition against a stronger enterprise, the various degrees of price leadership are hard to distinguish and hard to make the basis of an antitrust charge.

Similarly, the uniformity of prices sometimes developed by a few large concerns may be difficult to proceed against. With two sulphur producers in the United States, each can readily see that its own price policy will affect that of the other. The individual business judgment of either concern that the best thing to do is to maintain a high price in the hope that the other will do likewise may result in large profits and in prices that remain unchanged for a decade. Nevertheless, the process by which this result is reached may be indistinguishable from any other exercise of private discretion in determining a concern's prices.

The ability to catch collusion is the ability to prevent a great deal of such quasi-monopolistic pricing. A modern price structure involves such complicated differences of trade and quantity discounts, geographical price differences, differentials in price between related products, adjustments for long-term contracts, and the like, that the maintenance of identical prices becomes a matter of great technical difficulty. Even during the formal price fixing which some industries enjoyed under NRA, there were frequent variations in the prices because of differences in the application of the price formulas. In some industries standing committees were necessary to interpret the rules. To simplify the technique of price fixing, sellers often find collusion upon the terms of sale indispensable to the maintenance of uniform prices, even though the basic prices can be kept in line by some loose form of price leadership or of individual self-restraint.

When collusion about terms of sale is not present in these two classes of cases, a successful prosecution would require either that the government prove that a tacit conspiracy existed among those involved or that the government establish a new principle, as yet untested in the courts, that there may be monopoly as the joint effect of the separate action of members of a group as well as monopoly in a single enterprise. If the government chose to try by prosecution to alter the policies of those concerned, it would have to insist directly that in making their individual prices they should give different weight to various strategic considerations than they now individually give. If such a program did not seem feasible, the only other remedy would be to seek dissolution of the large concerns involved in order that, with companies smaller and more numerous, the market might provide less opportunity for such tacitly concerted price fixing. The development of price rigidities apparently based upon size or price leadership has been so great in recent years that the effort to remedy the condition by breaking up going concerns probably would amount to an effort to reshape by law a considerable part of the industrial structure of the United States. Half a century of neglect is difficult to overcome retroactively.

There is another and less dramatic way in which the problems of group monopoly and price leadership might be dealt with more slowly but with more likelihood of success. Fortunately we do not appear to have come to the end of the dynamic development of technology, the rise in the standard of living, and the expansion of our total market. Industries which were strategically important twenty years ago have been superseded by the development of substitutes. Regional markets have been expanded by the improvement of transportation. By further developments of this kind it is probable that many of our highly concentrated industries will be exposed to new competition. If we can take steps to limit the future growth of large enterprises, to preserve competition in the new industries, and to prevent expansion of the power of our present large enterprises, we may be able to reduce the problems of price leadership and group monopoly to manageable proportions. Such a policy involves peculiar care to protect the opportunities for new enterprises to enter the market as well as care to keep them from being swallowed up by the old concerns.

Moreover, something can be done to prevent the growth of tacit collusion in fields in which the small number of concerns have not yet found it possible to work together. In most cases in which a few concerns dominate the market, a diversity in their policies expresses an important difference in their strategic opportunities. One may be manufacturing many lines, and another only a single line; one may be distributing through small independent concerns, and another through mass distributors; one may be operating nationally, whereas another may be intensively cultivating a regional market. In so far as further development wipes out such difficulties the obstacles to group monopoly will disappear. Thus it becomes peculiarly important to preserve an open field for the competition of different kinds of distributive outlet, not only because the distributive trades need competition but because such diversities protect competition in manufacturing.

The problems presented by price leadership and group monopoly suggest the need for special emphasis upon the problems presented by growth in the size of the business unit. Economists have long pointed out the anomaly in preventing the union of competing productive facilities by agreement while permitting it by merger. As early as 1914 the Congress dealt with an aspect of this matter in passing Section 7 of the Clayton Act; but if that statute was intended to check the union of competitors it failed in its purpose by leaving the door wide open for purchase of the assets rather than the stock of the rival concern. Though adequate figures are not available, I believe that more of the growth of large American corporations during the last thirty years has come through the acquisition of competitors than through the construction of new plant and equipment. Instances of merger piled upon merger are found throughout our industries. Already the trend has contributed much to the problems of tacit collusion. Left alone for

another quarter of a century, it may well give us substantial monopoly in many of our major industries.

An illustration of the trend is to be found in copper production. The best available figures of the output of the three largest copper companies indicate that in the last ten years they have increased their control from a little more than 40 per cent of the total American production to a little more than 80 per cent. Most of this increase has come by absorption of other companies.

There is a widespread belief, carefully cultivated by those directly interested, that the growth of business enterprise involves a growth in efficiency. There may be some question in the development of any enterprise large enough to have appreciable bargaining strength whether its prospects of profit furnish any clue to efficiency in an engineering or social sense. Nevertheless, when concerns expand from profits or when they raise money in the open market for expansion, there is at least a presumption that the desirability of greater size has been measured by some pecuniary standard of comparison against other possible uses of the funds. In the case of mergers of going concerns, there can be no such presumption. The alternative is for the companies to compete or merge. So far as productive economies go, there is little reason to think that the union of two established plants will often make possible so close a dovetailing of processes or such a nice adjustment of facilities to markets as to lower costs of production. Economies in distribution might be expected to appear more frequently, but in the distribution field there is no clear evidence that the distributive activities of large enterprises capable of supporting their own distributive machinery are more economical in the social sense than specialized distribution through middlemen. On the other hand, the bargaining advantages of a merger are usually obvious. In the absence of specific facts such as are typically unavailable, there is no reason why we should set aside the public interest in preserving competition and in limiting individual bargaining strength for the problematical economies to be gained by reducing the number of competitors.

With the Clayton Act inadequate to prevent the union of competing concerns, recourse must be had either to new legislation or to the Sherman Act. The Federal Trade Commission has repeatedly recommended that Section 7 of the Clayton Act be altered to provide specific authority over the acquisition of a competitor's assets. Failing this solution, it may be possible to proceed under the Sherman Act. In a few cases the acquisition of a competitor may be interpreted as an attempt to monopolize trade either throughout the nation or in some particular section of the market. More generally, however, successful prosecution of mergers will require a type of case which has not yet been decided in the courts. It will be necessary to establish the view that a contract to acquire a competitor is a contract in

restraint of trade. If this principle is established, the case by case procedure involved in all prosecutions of restraint of trade will become applicable to mergers and will permit the usual distinction between reasonable and unreasonable restraints according to the facts of each particular case.

A solution of the problem of size is the heart of the question whether competition can be preserved by the antitrust laws. Without competitors there can be no competition; and with the present trend of corporate growth the disappearance of most competitors in many industries can be foreseen. Expansion for efficiency's sake probably is a self-limiting process; but expansion by fusion obviously is not. If this trend can be halted or reversed, the other problems involved in the enforcement of the antitrust laws will amount to no more than the ordinary problems of making an administrative agency effective. If, however, the scale of business is to continue to grow not only by expansion but by unchecked merger, it will be necessary to accept oligopolistic price policies as typical and to fight the battles against complete monopoly only as last-ditch struggles in a war already lost. Such a prospect would require the community to consider adopting types of industrial control which operate directly upon the policies of corporations, in recognition of the fact that a giant concern with powers not limited by its rivals in the market is a quasi-public enterprise. Such a development would involve, not the making of exceptions to the antitrust laws, but the preservation of the areas of competition as exceptions to the general economic policy. I do not relish that prospect, for it would require a vast machinery of control over the detail of industrial decisions; and in my judgment governmental control is one of our social resources which should be carefully economized.

IN WHAT AREAS SHOULD ANTITRUST POLICY BE REPLACED?[1]

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I

My own thinking upon the topic before us starts from the proposition that the existing economy is, for the time being at least, deeply in bondage to its historic past. Granted the existence of the well-known types of market organization little resembling conditions of pure competition, the competitive principle provides the basic framework of the economy and could not be rapidly and radically departed from without detrimental economic consequences.

No one can, however, be satisfied with past efforts to fortify the competitive regime or be content to entrust the public interest in industrial organization solely to the operation of the competitive principle. Old institutional furniture may have to be replaced. But dissatisfaction with the existing state of affairs is in itself no reason for change. There needs to exist the superior alternative.

To probe more deeply into these matters it is necessary to make some statement of the ends of policy against which to project both states of fact and policy proposals. In the first instance such a statement must be broader than one applicable solely to the antitrust law policy. Without hoping that many persons would agree with my exact formulation, I venture to present the following somewhat overlapping items which seem to me in conformity with broadly influential American attitudes.

1. In the most general terms, economic ends include:

a) Full employment

b) Relative security of livelihood

c) Larger national income

d) More equitable distribution of income, according to some rough standard of equity

2. Ends of that general character may be amplified by such items as:

a) The fostering of technical efficiency in production

b) Avoidance of wasteful dissipation of natural resources

c) Avoidance of wasteful duplication of productive facilities

d) Rapid liquidation of cyclical and structural maladjustments

e) Maintenance of capital expansion at rates conducive to more stable growth

f) Orderly adaptation to secular changes of industrial structure

3. Such ends cannot be dissociated from others which have to be stated in other than economic language:

[1] This paper is closely related to another published in the November, 1939, number of the *Quarterly Journal of Economics*.

a) Maintenance of a high degree of personal liberty

b) Maintenance of popular representative government

c) Diminishing the plutocratic authority of those exercising great economic powers

d) Preserving peaceful continuity in the flux of change

(I omit items relating to external economic and political relations.)

Such a list could easily be expanded to express ideals of humane existence.

Within the general structure of public ends it is by no means easy to make a brief statement of the specific ends of antitrust policy, since there is implicit in the ends a commitment to certain fundamentals of social structure which could only be stated at some length. Roughly, however, it may be said that the policy is oriented toward a quartet of ends assumed to be mutually compatible, but conceivably not compatible. These are: (1) the protection of consumers from exploitation; (2) the stimulation of productive efficiency; (3) insurance of freedom of entry into economic occupations and a "fair field" in the struggle for business survival; and (4) distributive justice. One can reduce this to a dichotomy, and say that the policy attempts to protect liberty of economic action as an end in itself and to promote general economic well-being as an end in itself. Doubts and perplexities arise when it is not clear that both sets of ends are promoted by the same general policy. Moreover, "general economic well-being" is a complex concept which when explored reveals conflicts of interest. "Freedom," too, reveals conflicting freedoms and diverse forms and degrees of freedom. Agreement is hardly to be expected as to what elements can be wisely sacrificed or diminished in order to magnify other elements.

The ends were formulated under circumstances of economic expansion. Even if these circumstances could be counted upon to continue, there have arisen states of fact which could hardly be regarded as conforming to the ends of policy and would call for re-examination of the means. But there is added the further complication that, upon the experience of the past decade, it is not possible to assume with confidence that a rapid rate of expansion will be self-generating. The central concern of economic policy has consequently come to be how to stimulate the greater use of productive resources, both through positive stimulants to production and through liquidation of the structural and cyclical maladjustments which have developed.

It is not infrequently suggested that the antitrust law policy bars the way to positive remedial action. This is certainly not the case in general, since the structural framework of the economy is articulated by competitive relations. Public discussion needs, therefore, to be focussed on areas where the antitrust policy is most ineffective in promoting the ends to which it is directed.

II

Due to time limitations, certain subject matters clearly within the scope of my topic will be merely mentioned in passing. The first omission is that body of industries already, for well-known reasons, excluded from the full application of the antitrust laws. This includes various types of financial institutions and the recognized public utility industries.

Another subject to which attention will not be given is that of industries standing in some peculiar relation to national defense. It is sufficient to say that considerations of military effectiveness might at some points properly suggest a closely regimented structure of production, if not direct government enterprise. This subject would naturally lead on to problems of industrial organization in a context of actual war. The topic is one which, at the present conjuncture, deserves close attention, but must in this paper be dismissed with the observation that the focussing of a nation's industrial energies upon military ends could hardly proceed under the same rules of organization as those designed to promote economic well-being and to protect the liberties of citizens in a nation at peace.[2]

A third subject that will not be taken up in isolation is that of conservation of natural resources. In actual experience, considerations relating to conservation are always found in conjunction with other problems of organization, so that it is more convenient to regard them as elements in more complex situations. They are therefore covered under the general discussion to follow.

With these excluded special subject matters out of the way it now becomes necessary to define what, for purposes of this paper, is to be regarded as an exception to the antitrust law policy. This is by no means easy to do, and in the end I shall have to delimit the boundaries of discussion rather arbitrarily. The difficulty is illustrated by asking (1) whether it would be a departure from that policy for government to limit private monopolistic powers by setting up competing plants and (2) whether it is a departure for government to introduce measures of market control in industries like wheat and bituminous coal where no problem of private monopoly exists. The first would be designed to make some markets more highly competitive than they are; the second is designed to make other markets less competitive; but both involve positive modes of public action as contrasted with existing enforcement of prohibitions.

Each of these is a topic about which little could be said short of a full-length paper, while I wish to devote this paper to still a third topic. Consequently it is necessary to dispose of the two topics mentioned with undue brevity.

[2] This is, of course, a disputed point. There is a persuasive argument based on wartime experience and the experience of totalitarian countries that unexploited miracles of potential productiveness are smothered under peacetime organization. To argue this point would carry the present paper wholly out of its orbit.

1. One way of attacking monopoly is through competition by public enterprises. Concerning the merits of this method of re-enforcing the antitrust law policy, I shall say nothing in this paper. But public competition can be used for other ends, and might conceivably have the effect of undermining that policy. The subject comes up in connection with the argument for large-scale public investment. This argument is sometimes advanced with little reference to the possible directions of investment and the possible repercussions upon private enterprise. The end in view is not the activation of competition but something quite different. The proposal appears, in some versions, to be wholly indifferent to the impact of public investment upon the underlying structure of industry, and in other versions appears to be a potential instrument consciously advanced to promote a considerable reorganization of economic control in a collectivist direction. In either case it is quite clear that the use of public investment without regard to collateral consequences could easily undermine the incentives to competitive private production, in this industry or that. This seems to me an excellent way *not* to proceed to the making of exceptions to the antitrust law policy. I am by no means opposed to the prudent practice of public investment, but one feels the need to check the indiscriminate zeal which the idea engenders in some quarters. Reorganization of the control of industries is a delicate operation which ought not to be undertaken merely as the secondary consequence of doing something else.

2. Let us turn now to matters illustrated by agricultural policy. If the antitrust law policy be defined as that of making the economic system "as competitive as possible," control of agricultural markets is certainly a departure. This rendering at once runs into difficulties, since many features of market organization which economists describe as technically monopoloid have never been under attack. However that may be, it is decidedly the case that problems of diminishing the full impact of competition where it is strong are of a different order from those of coping with monopolistic elements where they are strong. In actual economic processes the two are undoubtedly interrelated in ways that are familiar to all economists, but the differences are such that one may reasonably focus attention on the latter in this paper without further reference to the former.

There is, however, a remaining difficulty. The sharp distinction between highly competitive and highly monopolistic industries fades away in a broad intervening territory in which markets display many forms and degrees of difference in the mixture of competitive and monopolistic characters. The difficulty which this introduces is illustrated by the following quotation from a paper by Professor J. M. Clark:[3] "What seems to be called for is a realistic control of trade practices which should not simply prohibit unduly restrictive forms, but should assume constructive responsi-

[3] *Proceedings of the Academy of Political Science,* XVIII, No. 2 (1939), 9.

bility for working out for each industry, where unduly restrictive forms are found, the form which, in that industry, bids fair to give the nearest practicable approach to the results of 'normal' competition."

Within this very general language one could limit the meaning to special administrative means, applied to particular industries, serving at once to define permissible forms of associative business action and to make the antitrust policy more effective. This interpretation is supported by Professor Clark's later statement, "I believe, though I cannot prove, that capital must in the future adjust itself to a lower rate of return than it now considers reasonable, and to degrees of competition which it now considers unduly severe, or paralysis will follow."

In using the one-at-a-time approach to problems of industrial organization, it is obviously possible to imagine varied types of public control adjusted to almost any compromise between competitive and monopolistic characteristics within industries. The approach itself gives no clue to the possible outcome. It may superficially appear sensible to seek a "reasonable" special solution for each particular case without regard to antitrust law rules. But it seems to me highly important to differentiate procedures which may properly be called implementation of the antitrust law policy from those that are departures from it.

The administrative reason for this is that, so long as the guiding principle of competitive organization is embodied in general law, broad discretion can be given administrative agencies for making it effective, even to the point, suggested by Professor Clark, of working out special rules of market practice. No such discretion can be tolerated for setting aside in particular cases the principle of organization embodied in the general law. Otherwise, administrative agencies could at their discretion radically do over the whole structure of market relations according to their own conception of what was right, good, and proper. A definite departure from the general rule calls for special legislative sanction.

Nor is this all. Any effort at general solution of problems presented by "disorderly competition" and monopoly, separately or in combination, cannot now dispense with the self-recuperative powers and expansive urges which inhere in a system well supplied with competitive characters. Proposals to follow the one-at-a-time approach, unanchored to this guiding principle, are simply an easy mode of evading the fundamental policy questions. Thus, by the very nature of the policy problem, we are driven to the necessity for absolute particularity in the choice of areas of industry which are to be organized on more highly monopolistic lines. At this point one is abruptly faced with questions both of ends and means.

III

Since it has been the subject of so much recent discussion, I wish to pick out for special attention the end of economic stimulation. The general think-

ing on monopolistic barriers to business revival, consisting in the main of valuable economic platitudes, need not be called into question. What has to be examined is the implied necessity of departure from the antitrust law policy as contained in certain widely-known proposals.

Let us pause to see more precisely just what the problem is. It is that of adopting, in limited spheres of industry, forms of industrial organization and administration through which incentives can be made operative, inducing price policies conducive in the short run to increased production and, through time, conducive to more flexible and rapid readjustment to changing economic circumstances.

Focussing attention on the need for such incentives enables us to dispose rather summarily of all proposals which offer only forms or mechanisms of control. These may be illustrated by proposals to set up modified NRA code authorities containing representatives of investors, management, labor, and "the consuming public." There are no grounds for supposing that a controlling body, constituted mainly of persons who have an immediate private interest in current operations, would, without special incentives, make wise decisions guided by public interest.

In saying this, I do not wish to be misunderstood. I think it wholly in the right direction to consider means by which the public interest in industrial operations can be continuously and forcibly brought to the attention of those who exercise control. Certainly I do not object on principle to public representation. I am merely insisting that it would be folly to proceed to enhanced monopolization of the control of industry simply upon the basis of a bright idea about the constitution of the controlling bodies.

To return to operational incentives, the need for them is fully appreciated by persons who have advanced various proposals highly relevant to our present topic. A case in point is the well-known proposal of Professor Sprague and others to activate the construction industries through a set of agreements among interrelated fabricating, contracting, and labor groups designed to slash building costs and thereby to make effective a large potential demand for new construction, re-enforced perhaps by assured low interest rates and by subsidies to building projects.

Under certain assumptions of fact which would have to be carefully tested, such proposals are highly sensible in economic terms; but I am not aware of any examination which has been made of their potential consequences for industrial organization in the affected spheres. It is, of course, quite possible that some progress might be made by voluntary groupings of manufacturers in new forms of integration not involving the antitrust laws. But, for any broad application some sort of formal cartelization and intercartel agreements would seem to be required for a number of reasons I shall not take the time to set down. Intimate public supervision over,

if not prescription of, the terms and administration of the agreements would also be required. It seems quite clear that the new forms of organization and control could not be summarily abandoned after accomplishing an initial stimulative purpose for which they were designed. So two crucial questions leap to the mind: (1) whether public agencies would be able to exercise wise and effective control over the course of building costs through ups and downs both of prices and constructional activity; and (2) whether it is advisable to promote more monopolistic forms of organization which would require them to attempt so to do. One would wish certainly to be well-informed concerning the collateral consequences in industrial organization and methods of public control before making any commitment to a particular plan of procedure.

In the case of Professor Sprague's proposal, the necessity of making any choice is removed by the fact that the parties at interest have shown no interest in putting it into effect voluntarily, and I have heard of no way in which it has been suggested how public coercion could be exercised to put it into effect.

The next type of proposal has points of similarity to the last, but is not limited by reference to a definite sphere of activity. This is the proposal to underwrite a program of expanded production and lower prices by public guarantees. Aggregate production schedules, drawn up within each participating industry and approved by a public or quasi-public agency would be reassigned in quotas to the members of the several industries, who would be guaranteed against loss so long as they marketed the product (or failed to market it) within an approved range of prices.[4] The scheme would presumably require cartel-like organization as well as inter-industry councils or super-cartels, and, to the extent of its coverage of industries, would be an alternative to the antitrust law policy.

The initial coverage could be either broad or narrow, but in any case the plan is expected to involve inter-industry planning based upon certain "key" industries. The supporting argument presents a "managed" version of Say's law. A simultaneous advance in production, supported by guarantees, will, it is hoped, magnify the national income and distribute it in a manner to move the additional produce, a process calling for quite broad coverage. Over a longer run, it is hoped that controlled rates of production with fluctuating controlled inventory holdings will diminish the instability in rates of industrial production and volume of employment on the analogy of the "ever-normal granary."

The plan itself implies no limits upon the extent of its application except those of experimental caution, administrative feasibility, or arbitrary choice. On these points proponents face a kind of dilemma. To secure

[4] See Jerome Frank, *Save America First*, especially Book III, chapter 14; Mordecai Ezekiel, *Jobs for All;* the program of the Association for Economic Freedom; and Max Lerner, *It Is Later Than You Think*, especially chapter 6.

the Say's law effect a broad application is desirable. But experimental prudence suggests a narrower initial application. Mr. Frank, for example, after making the former point, proposes experimenting with a single industry, steel. In another context, at Hearings of the Temporary National Economic Committee, Mr. Frank even more strongly argued the wisdom of approaching the problem cautiously through particular industries, on this point not disagreeing at all radically with Professor Fetter.[5]

By way of contrast, blither spirits advance proposals which, if they could be rapidly effected, would seem well designed to do unpremeditated damage to the foundations of American economic society on the principle of Havelock Ellis' "law of irony" that human beings pursue remote objectives which, when attained, turn out not to be what was being sought.

The planning idea under discussion attracts attention by its claims to be a measure of economic stimulation. But this is purely an optical illusion. It represents a major reconstruction of the organization of industrial controls incapable of rapid introduction. Whether in some remote future the scheme of relations envisaged could contribute to a larger, more stable, and more equitably distributed national income, no one can possibly foresee.

The deficiencies in the various planning proposals drive one to the conclusion that a groundwork of exploration has to be laid in detail in particular industries.

IV

Just as soon as one turns to particular industries, it becomes obvious that one cannot be limited by the narrow frame of reference which sufficed for discussing the planning proposals referred to above. There exists a great dissimilarity in the organizational forms of various industries, in the ways in which public ends are involved in their operation, and in the possible measures of reorganization of control which might be introduced to safeguard the public interest. The problems of antitrust policy which exist in relation to the particular industries are certainly not exhausted under a statement of ends in terms of economic stimulation or stability.

Something of the complexity of the matter may be briefly shown by examples drawn from among those large, concentrated industries which invite attention as possible candidates for release from antitrust law policy. Petroleum is an especially useful example. There is here no problem of stimulating production. Within the complex structure of the industry are the most diverse elements of competition and monopoly. There is a public interest in conserving petroleum resources, in avoiding undue marketing costs, and in ending price discrimination. But the critical problems of organization appear to be mainly distributive within the industry, de-

[5] Hearings before the Temporary National Economic Committee, Part V, pp. 1951-1979 (1939).

riving from a conflict of interests between different parties at interest in the complex structure of the industry and not from any serious complaint of the public as consumers. The reasons for departing from the antitrust law policy, in so far as they exist, are to be found only in the facts of the industry itself, and appropriate administrative means for a reorganized structure would have to be invented *ad hoc*. No general formulas relating to either ends or means would be applicable.

Let us turn to aluminum. This industry attracts attention mainly because it seems anomalous for a single company, in spite of antitrust laws, to possess so complete a monopoly as it has. Also, great profits have been made from it which, both directly and indirectly, have contributed to distasteful things known as concentration of private economic power and extremes of economic inequality. Yet, on the other hand, the industry has had to make its progress through a field of substitutes on all sides which could only have been done by great technical ingenuity and progressiveness. There is certainly here involved a situation of a type which one should hate to see become typical of the control of industry, yet which is at the same time very elusive in relation to various ends of public policy, and of great difficulty from the point of view of prescribing an alternative organization of control more clearly in the public interest.

Turning to steel, one finds an industry which has been subject to complaints through good times and bad. In recent years the principal complaint has been a rigid price policy inimical to expansion. Long before, however, there had been the complaint of an informal system of monopoly pricing which placed barriers in the way of economical location, exaggerated transport costs, discriminated between geographical areas, controlled the location of fabricating industries, and provided a considerable insurance of profits. Yet all these phenomena occurred in connection with great technical progress and physical expansion, sufficient to support what many think to have been an overrapid expansion of capital facilities generally. Perhaps the basic earlier complaint lay in the realm of discrimination. But is anyone competent to pass upon the "rightness" of the level of steel prices through the past two decades? The problems of organization in the steel industry, through good times and bad, through short and long run, are indubitably real and exceedingly complex, but they do not fall under any simple statement of public ends nor suggest any obvious form of reorganized control.

Time does not permit that the nature of the problems in these various areas be further explored. I have introduced them solely for the purpose of suggesting the impossibility, when one particularizes, of diagnosing a complaint common to all of them, or of stating with explicitness any particular end of policy to be pursued in all cases, or of finding any uniform sort of administrative means through which to pursue the public interest

in their organization. The idea could be doubly re-enforced by adding further examples.[6]

It is therefore necessarily the case that one can at present have no explicit answer to the question asked in the subject assigned to me. There are plenty of industries which invite the thought of possibly advantageous results from some alternative to the antitrust law policy. But there is not a single important industry, other than those of the public utility type, in which all the relevant factors have been examined and modes of reorganized control imaginatively devised to a point to justify an assured recommendation that it be transferred from the existing status of nominal conformity to the antitrust law policy. In this opinion I think practically every close student of industrial organization will join me.[7]

The problem as now presented is, therefore, not that of deciding what forms of reorganization to effect, but rather of where to begin and how to proceed. Present ignorance of what would be appropriate measures of reorganization of control in particular industries is no barrier to setting up a reasonable *modus operandi* for finding out. The beginning has to be specific. Particular industries have to be subjected to the closest scrutiny. In deciding what ones shall be first, the grounds of choice would be strictly pragmatic, based upon tests of relative importance and experience of peculiar difficulty in making the antitrust law policy effective. Steel and petroleum at once suggest themselves as good candidates, as do a number of other industries engaged in extracting and first processing of various minerals.

[6] If time permitted, it would be interesting to examine particular ends to test the proposition that no single end of policy can be single-mindedly pursued. "Efficiency" is a good example. In this key was sung most of the early defense of the combination movement, and a little later, much of the opposition to it. The relation between size, efficiency, and progressiveness is the most familiar of all topics in antitrust law discussions. But no one who has fully explored the matter would argue that efficiency, however defined, could ever be accepted as the controlling criterion in judging whether or not to deviate from the antitrust policy. Moreover, the content of the term is highly ambiguous, and tests of efficiency equally applicable to good times and bad, to the short and long runs, to private and collective ends are nonexistent.

Moreover, contra the usual ambiguous definition of natural monopoly, it may be that there are numerous industries in which, *ceteris paribus,* the greatest economy of operation could be achieved by total regional monopolies. Policy might desert the principle of efficiency in such cases because of the desire to avoid the collectivist functions entailed. Again, even where low cost operation is compatible with size far short of unitary monopoly in any market, it may carry concentration to a point where monopolistic features of organization are pronounced. Policy might, therefore, reasonably desert the principle of efficiency because of a desire to avoid problems of organization and control connected with pursuing it. And policy might equally not pursue some short-run prospect of efficiency because the organization involved would be antipathetic to long-run progressiveness. Again, in the short run of depression periods, pursuit of low cost operation must almost necessarily run at odds with the desire for fuller employment. Finally, it is wholly unlikely that large powers of public control could, politically speaking, ever be used in the conscientious pursuit of efficiency. Similar tests could be applied to any other single end of policy. In some degree I have already done so above in relation to the currently emphasized end, "increased use of resources."

[7] I refer only to industries exhibiting strong monopolistic features; not to industries in which problems of organization arise out of a highly competitive market structure.

Most suggestions for procedure get put the wrong way round. It is sometimes suggested that a broad analysis of industrial structures, oriented on criteria of similarity between industries, is a *sine qua non*. But this is by no means the case. Indeed, the matter is the other way round. The broad analysis depends upon the prior existence of analysis of particular industries. At the outset constructive ideas concerning substitutes for antitrust law policy have no meaning except in the context of particular industries, however much cumulative experience might aid in dealing with subsequent problems of organization.

Granted this point, one must further question another misleading assumption that, in the case of particular industries, the principal present difficulty is ignorance. It is, of course, the case that industrial organization is largely *terra incognita* to economists and public officials. But even where knowledge is fullest, the best-informed persons are still in a quandary. This is because the really perplexing difficulties are those in the field of administration. The most exhaustive knowledge of any industry does not of itself suggest forms of reorganized control which could be counted upon to promote public ends. On this account I submit to the temptation to encroach upon the territory more specifically assigned to Professor Wallace in today's program. Professor Wallace suggests a variety of devices potentially available, but I wish to focus attention firmly upon the central and inescapable problem.

V

My discussion is limited to the problem of administering monopolistic powers to social advantage. This would require an increase in the degree of concentration of control. There are two general alternatives. One is outright government enterprise, following acquisition of private producing properties. The other is government supervision, in some manner, of the business behavior of private managements. This again breaks down into two general forms. One is the form of unitary monopolies on either a regional or national basis. The other is some variant of cartelization.

Current discussion tends to explore most readily the last of these alternatives, the one which would represent the least radical departure from the existing structure of control. On this type of departure converge the desires of business groups desiring "self-government" and the tentative thoughts of "planners," with, however, quite different ideas about the structure of control. I shall not pause to argue that business groups do not design collective forms of control suitable for the pursuit of public ends. The other approach, emphasizing public interest, calls for some division of managerial powers between private and public agents. It is the manner of dividing authority, with reasonable promise of improved public well-being, that lies wholly outside the range of experience. This

is the exact problem to be solved, and no case can be made for departure from the antitrust policy in the case of any segment of industry until a solution, applicable to that area, is in hand. As Dean Landis has so wisely said, "To essay what we cannot do is often worse than to do nothing."[8] With equal wisdom, he says, "Study of the practical limits of administrative action is still too dormant."[9]

I am not in the least prone to deny that in some industries it might be possible to pursue public ends more effectively through some cartel variant. I merely assert that no relatively assured means of so doing is at present extant in the whole sphere of public discussion in relation to any industry. The possible uses of cartels as a restrictive device, as a discriminatory device, as a device to slow down the pace of change and to protect vested interests, are well understood. But their use as means for bringing public power to bear upon price, production, and labor policies, counter to the dictates of business judgment, in the interest of larger, more stable, and more equitably distributed national income lies as yet over the horizon of human ingenuity.

As a purely personal judgment, I doubt that they will ever be useful for those purposes except in the most exceptional cases, breaking on the administrative rock. If, therefore, they are widely invoked in the interests of "stability," I imagine that an expanded scope of "the public economy" will be called for to compensate for the restrictive effects following in their train.

From this position, the thought follows that, in considering the possible introduction of a more highly monopolistic structure in some industries, attention ought to be paid to the possibly superior merits of unitary monopoly. The public administrative problems are inherently simpler; and in a number of industries, at least, the prospects for efficiency, in some socially valid meaning of the term, appear to be greater. Industries in which it is not difficult to envisage this structure, and in which possible advantages can be discerned, probably deserve to occupy a special status among prospects for exceptions from the antitrust laws. Whether, at the end of the road, private or public enterprise would be preferable in any particular case is a point which need not occupy our attention here.

The actual processes by which government might press toward unitary monopoly are greatly curtailed by existing judicial rules of "due process." It therefore seems unlikely that very effective action would be possible without a constitutional amendment. Indeed, it is almost equally unlikely that effective measures of control over cartel-like combinations could be carried out without an amendment.

Under existing judicial rules it would not be difficult to foster more

[8] J. M. Landis, *The Administrative Process*, p. 122.
[9] The same, p. 122.

highly monopolistic forms of market organization, but only on the prospect of monopolistic benefits accruing to those private interests whose voluntary co-operation would be needed. This is the anticipated outcome of proposals which are insistently pressed upon legislative bodies from business quarters. The nature and magnitude of these pressures raise the question whether more highly monopolistic forms of organization, once admitted into the economy, could be insulated against such pressures and administered conscientiously in the broad public interest. The prospects are such as to justify a very cautious approach to the whole matter.

VI

The unresolved perplexity about appropriate reorganizational expedients disturbs my mind less than it seems to do the minds of many other people. This is partly because I do not take a highly alarmist view of the state of industrial organization. But mainly it is because I do not see how the means of improving the state of industrial organization could be expected to take form until the necessary explorations have taken place. The work of the Temporary National Economic Committee, however valuable, is only a beginning. A permanent agency is called for. It must be dissociated from punitive activities. It must, until experience proves the contrary to be justified, have no coercive powers except perhaps those of subpoena. It must be subdivided into as many divisions as there are industries under inspection. These divisions must train up experts in the organization of particular industries.

An extended process of mutual education and conditioning is called for: for public servants, in the nature of the problems of industrial organization and business policy; for private managements, in the nature of the public interests they are expected to serve; for both, in the possibilities of sharing authority in the simultaneous pursuit of public and private ends.[10]

If and when knowledge and circumstances warrant, special legislative action can vest in an appropriate new agency authority to introduce innovations in the control of a particular industry and to exercise defined degrees of authority over its operations.

No one can, without recklessness, suggest going rapidly beyond the preliminary process outlined above. Nor ought anyone to prejudge the outcome in administrative innovations in respect of any particular indus-

[10] This preparatory process, while essential, is subject to a serious hindrance by reason of the existence of the antitrust laws. A state of mutual confidence and complete candor, such as ought to grow up between public agents and private managements, is impossible so long as skeletons of violation are concealed in business closets. Managements are placed in a defensive position, and public agents, even though having no punitive purpose, must in the mere effort to be fully informed in some degree become detectives. There is not much that can be said about the matter. It is simply a fact which makes more difficult the task assigned.

try; nor assume out of hand that an alternative superior to the application of antitrust law rules will be found. These opinions reflect my profound distrust of those who, by reason of alarmist misgivings, or distaste for the social consequences of modern industrialism, or addiction to theories of industrial evolution, are driven to support rapid and radical departures from the existing basis of industrial organization. They run far beyond the beam of light by which experience guides the footsteps of intelligence.

Whether it will be politically feasible to initiate an intelligent approach to the problems presented is a point upon which I shall not pause to speculate. It is worth remarking, however, how futile it must be to draw up ambitious plans of industrial reorganization so long as the political opposition of industries whose members dislike public attention does not permit even the first step to be taken toward an intelligent approach to problems of reorganization. Meantime, in the absence of such an approach, it is wholly appropriate to continue efforts to make the competitive principle more fully operative, even in those areas of industry where one may think that a possibly superior alternative could be found.

KINDS OF PUBLIC CONTROL TO REPLACE OR SUPPLEMENT ANTITRUST LAWS[1]

By DONALD WALLACE
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I

The broad problem for consideration at our two sessions on competition and monopoly is, what sorts of public control of markets, including antitrust laws, can do three things: (1) promote greater economic efficiency by getting idle resources used, by improving the allocation of resources, and by stimulating progressiveness; (2) diminish inequality in distribution of wealth and income; and (3) help to preserve and refine further our democratic heritage of freedom, equality of opportunity, representative government, and legal restraints on the use of power both public and private. We seem to be committed to an economy of power positions; hence the problem is that of balancing private and public power so as to achieve these objectives. I am skeptical of the effectiveness and the practicability of integrated, over-all management of the whole system of markets, or of any very large segment of it, outside a pretty thoroughly socialized economy, which I have not time to consider this morning. Accordingly, I shall limit my discussion to the problem of fitting specific kinds of public control to particular market situations found in areas rather small relative to the whole economy. By areas I mean individual firms, industries, or markets, or groups of these.

At the outset I think we must recognize that we have at present neither sufficient knowledge to formulate any comprehensive program of change in public policy along the lines of fitting particular sorts of control to particular areas, nor sufficient knowledge to be sure that the antitrust policy ought to be the general policy. Deficiencies in knowledge are of two sorts, both critical. There are few factual studies of market results in particular areas which indicate the extent to which actual results fall short of desirable results, in terms of economic efficiency and distribution. Nor do we know much about the extent of improvement which could be expected from different sorts of control in various markets. It is plain that our economy as a whole functions at a deplorably low level of efficiency, considering its disposable resources, and that inequalities in distribution much exceed any differences consistent with social health. But the degree of responsibility for these shortcomings attributable in any general

[1] In considerable measure this paper was prepared in close connection with a study of standards of government price control undertaken by the author for the Bureau of Labor Statistics for submission to the Temporary National Economic Committee. This paper has benefited from special reports submitted for that study by Messrs. Ben. W. Lewis, Warren C. Waite, Don S. Anderson, Ellery Gordon, R. K. Froker, William Y. Webb, and John M. Blair.

way to present market organization and processes is far from clear. Even more obscure is the causal significance, in relation to these failings, of particular elements and policies in particular areas.[2]

Secondly, as far as I can see the true relations between free private enterprise and all those relations, institutions, and processes which we call democracy are hidden behind a mist of traditional but not unquestionable beliefs, psychological guesses, and rationalized prejudices and hopes. If the preservation and improvement of democracy requires that freedom of private enterprise be not diluted much beyond its present composition, then the variety of applicable kinds of control will be narrowly limited, except in the minds of those who regard maximum economic efficiency and reform in distribution as a higher good. This is not, however, the only facet to the question of the relations between democracy, free enterprise, and public control. There is now good reason to ask also whether retention and development of democracy is compatible with prolonged failure to design and apply public controls which markedly improve efficiency and distribution.

On this crucial question of the relations between democracy, free enterprise, and public control, I can, unfortunately, say but little. I shall discuss a variety of possible sorts of public control, principally in their more narrowly economic aspects. I hope that this will provoke discussion of their political and administrative aspects, especially from those in the government service and from political scientists. To those future presidents of this Association in my audience I should like to suggest that joint meetings with the political scientists are long overdue.

II

On the economic side the problem of neatly fitting particular kinds of public control to particular areas involves ascertainment of market results in each area with the existing kind of control and comparison with the probable results under alternative sorts of control.[3] The variety of kinds of public control which may conceivably aid in improving economic efficiency and diminishing inequality is not always appreciated. Kinds of control signify various combinations of objectives, control devices, control agencies, and economic standards. Examples of specific objectives are reduction of monopoly power, prevention of unnecessary profits, and raising the level of use of resources in the whole economy. Control devices are

[2] I have elaborated these points in an essay contained in a recent collection of essays by several authors (*Public Policy,* Harvard University Press, 1939).

[3] In the last analysis this calls for a classification of firms, industries, or markets into a limited number of groups according to similarities and differences of market results in terms of efficiency and distribution; and for a co-ordinate classification of kinds of public control showing the kind or kinds most appropriate for each class of firms, industries, or markets. I pass over the problems of developing a classification of markets as outside the scope of my topic, and take up various sorts of control.

such operative techniques as limits upon methods of competition or other business policies, taxes, subsidies, fixing of prices or incomes. Control agencies are, of course, such instrumentalities as legislatures, administrative departments and commissions, courts, advisory boards, functional industry authorities, and government corporations. By economic standards I mean more precise statement of the objectives. Standards are the criteria which show the direction and limits of change in market results needed to attain the objectives.

Reserving standards for later treatment, I shall select several combinations of the other elements that constitute important kinds of public control and note three bases for classifying them, recognizing that further factual study of different market situations and of types of control should disclose other bases for classification.

Let us first differentiate those kinds of control which involve direct participation by government in the determination of market results and those sorts of control where reliance for the production of desirable results is left mainly to the activities of private individuals or groups acting within limits set by government and through processes sanctioned or required by government. The essence of the latter class of controls lies in public action on the structure and conditions of the market and the processes by which market results are determined. Such action is expressed in public prohibition or requirement of particular structures or practices.

In this category there seem to be four kinds of public control worth distinguishing: (1) Provision of information on market conditions, in the broadest sense, and on the social consequences of business policies. (2) Antitrust policy. (3) Collective bargaining or negotiation by representatives of two or more interested groups such as management, investors, labor, purchasers, suppliers, and bankers. Collective bargaining may be used as a method of determining any one or more of the fundamental market results: investment, output, sales, prices, incomes, and employment. Government action limited to sanctioning or requiring collective bargaining, definition of permissible or required procedures, and supervision to ensure compliance with the laws and enforcement of the bargains, involves no direct participation of government in the determination of market results. (4) Consumers' co-operation with government assistance in the form of exemption from the antitrust laws, dissemination of information, or provision of financial aid as in the case of rural electricity co-operatives.

Direct participation of government in the determination of market results seems to break down into six additional major types of control. (5) Regulation in the form of setting limits upon or outright fixing of capacity, capitalization, output, prices, incomes—some or all of these—by legislatures, departments, or commissions subject to judicial review. (6)

Public monopoly. (7) Government competition.[4] Government competition may represent merely one very effective method, but, I think, ordinarily an undesirable method, of bringing about public monopoly. This I do not discuss. The rules for government competition, which is intended to remain competition, may differ according to the emphasis upon competitive or regulatory aspects. In the one case, after equalizing, in actuality or by formal accounting, the interest rates, wage rates, taxes, and other items of cost to the public and private corporations, the government corporation would compete according to ordinary commercial principles, striving to cover its own costs as far as possible, but not making any monopoly profits. On the other hand a government corporation regarded as essentially a regulatory instrument would determine its policies entirely on the basis of the costs and other conditions of the private firms, with the objective of compelling them to adopt the most efficient volumes of investment and output and the best rates of progressiveness of which they were held capable, and which were consistent with their receipt of the minimum profits necessary for them to attract capital. Whether the government corporation covered its own costs would be irrelevant. Continuous deficits, incurred because it was less efficient or in order to absorb sufficient freight to regulate the prices of distant private firms, would be regarded as costs of regulation. If it were more efficient or more progressive it would need to refrain from serious inroads on the markets of private firms, and be satisfied with extra profits. Obviously it would not be easy to obtain understanding and acceptance of government competition that was essentially regulatory. (8) Functional authorities composed of representatives of interest groups and government officials empowered to represent the general public interest. The distinction between this sort of control and collective bargaining lies in the participation of public representatives in the negotiations by which market results are determined. (9) Subsidies as an instrument for improving efficiency or distribution. (10) Taxes. Some kinds of tax, such as an undistributed profits tax, belong in the first category; others in the second category. Most of the tax devices related to objectives that I consider today are so esoteric that I shall omit discussion of them. These ten sorts of public control are not all mutually exclusive. Many combinations are possible, of which some will be noted as we proceed.

Another basis of classification of kinds of public control is found in a distinction, sometimes tenuous, between attempts merely to prevent undesirable results and endeavors to obtain desirable results. Government agencies cannot by law or orders make people invent or introduce

[4] I do not place this among antitrust procedures as Mr. Homan does, because it involves direct participation by government in determination of market results. I daresay most businessmen would be inclined to agree with me rather than with Mr. Homan.

improvements at a certain rate, explore elasticity of demand vigorously, carry investment up to a point considered desirable, or carry on production at a loss. Each of the ten sorts of control mentioned is well suited to prevention of one or another sort of undesirable market results, but not all of them can be effective in achievement of particular desirable results. For example, is it not probable that regulation by an administrative commission or department is really effective mainly in preventing or correcting undesirable market results?

A third basis of classifying controls lies in the relative emphasis placed on economic ends and on democracy. Our broad problem is to find a desirable balance between economic efficiency and democracy. Most kinds of public control are directed mainly to improvement in efficiency. Collective bargaining may be regarded primarily as a method of introducing the institutions and processes of representative government into the market place—an extension of economic democracy in a very direct way—as well as a method of diminishing inequalities in market bargaining power. In less degree, perhaps, the same may be said of functional authorities.

III

Let us now take up in turn two major economic problems, noting under each the sort of standards that are applicable and some of the relative possibilities of different kinds of control in applying such standards. We must distinguish sharply between the objectives and standards pertinent to each of the problems: (1) the familiar problem of efficient allocation and utilization of resources on the traditional assumption that all resources will be used; and (2) the "new" problem of raising the level of use of resources in the whole community. Plainly the latter is now on all counts the crucial problem. And the apparent impossibility of reaching the goal of full use of resources through monetary policies and pump-priming alone renders imperative a searching investigation of the possibilities of public control of markets as a means to this end. In this brief paper I can do no more than indicate some of the possibilities. For reasons already explained I exclude consideration of over-all market management to change prices or investment simultaneously in all markets in the economy or in any large segment of it comprising a great number of different commodities.

How might control of prices or investment in a particular area promote greater employment of resources in the whole economy?[5] According to one theory higher prices in certain areas, bringing larger incomes there, will increase demands for other things and hence promote gen-

[5] Limitations of time make it impossible to distinguish here between the cyclical and secular aspects of this problem. I have made some distinctions of this sort in my essay in *Public Policy*. Similarly, failure to consider wages, inventories, and reserves does not imply that they are unimportant in relation to this problem.

eral recovery. This neglects the total effects outside the areas where prices are raised. On the other hand we have the familiar view that lower prices in a given industry will increase employment of resources in that industry and hence raise employment of resources in the whole economy by that much. This view overlooks entirely the effects on employment of resources outside the area where price has changed. If lower prices for lumber merely result in shifting an increment of spending from brick and stone to lumber there will be no appreciable effect on the employment of resources in the whole economy.[6] The total effect of a change in prices or investment in a particular area on the level or use of resources in the whole economy is the algebraic sum of the effects inside and outside that area. In the "old" problem of best allocation and administration of resources it was tacitly assumed that the total effect from a change in one area would be zero. With unemployed resources the significant problem is to obtain changes in particular areas with total effects greater than zero.

Lower or higher prices in a particular area may affect total use of resources in the economy in two ways.[7] They may alter the total employment of labor and capital supported by a given total expenditure in the economy, as in the case where consumers get more of one commodity for a smaller gross expenditure on it and spend a larger sum on other commodities. Price changes in a particular area may also bring about a change in total spending through their effects on hoarding and on borrowing.

Aside from NRA and AAA little attention has been paid by legislatures and authorities charged with public control of various industries to the problem of the relations between prices and investment in a particular area and the level of use of resources elsewhere.

In the main the objectives and standards used in public utility regulation continue to be related to the problems of allocation of investment, reasonable rates, and prevention of monopoly profits. Many public utility commissions reduced rates in depression, but not in most cases as a result of study of the probable effects in other parts of the economy.[8] The decisions of the Interstate Commerce Commission on general rate cases

[6] In general, a price reduction anywhere increases the real income of the community. The problem considered here concerns increases both in real income and in the rate of use of economic resources.

[7] I have sketched some of the theoretical principles applicable to this problem in an essay, "Monopoly Prices and Depression," in *Explorations in Economics*.

[8] Their action seems to have been motivated by such considerations as (1) desire to reduce rates below levels which they considered unnecessarily high but which had been permitted during prosperity by the court rule of fair return on present value, (2) belief that a depression fair return was lower than a fair return in prosperity, (3) belief that it was only fair to consumers that utility rates should be lowered as other prices and incomes fell, (4) mere assumption that lower utility rates would conduce to recovery. Under the present law of confiscation public utility commissions would probably have little leeway to manipulate rates in the interests of recovery even if they did study the problem and develop standards in which they had confidence.

during depression laid most emphasis, as before, on the effects of rate changes on carrier revenues and credit. The investment program of TVA has been regarded partly as a means of stimulating the durable equipment industries, but TVA's electric rate policies have not been formulated according to analysis of the effects upon the level of use of resources elsewhere.

The AAA constitutes the leading instance of an avowed attempt to promote recovery in the whole economy by shifting the flow of income and spending through the device of price control in a group of industries. Let us examine briefly one example in this program—milk control. The evidence shows that the AAA raised milk prices to producers and that retail prices also went up. With demand inelastic in the range of the price increases—of which there seems to be no doubt—more dollars must have been spent on milk by the whole community and less on other things than would have been the case if milk prices had not been raised. It follows that the level of use of resources as a whole must have been lower as a result of the milk price increases, unless these higher prices somehow led to an increase in total spending in the economy at least equivalent to the increment of expenditure shifted from other things to milk; that is, the decrement in spending on all other things.[9] To produce such a result farmers and producers of goods purchased by farmers would have to spend, out of personal hoards or idle savings or bank credit, an amount equal to the increment added to their income, in addition to spending this increment of income. Yet even that might not be enough, unless they acted very quickly. If the beginnings of diminished spending of consumers as a whole on all other things led the producers of these other things to spend less on equipment and inventories, the total decrement of expenditure outside milk, attributable to the higher milk prices, would be increased. Hence, if higher milk prices were to result in an increase in the employment of resources in the whole community, it might be that dairy farmers and producers of things bought by them would need to spend the increment to their income plus a further sum from hoards or from the banks equal, perhaps, to as much as double this increment to their income. The above analysis applies *a fortiori* in so far as higher milk prices would result in less production of milk than would attend lower prices.

One qualification to this conclusion may be noted. The increment of income transferred to farmers might be spent faster by them than by those who would have received it otherwise. If the latter would have spent none of it, and the farmers would spend all of it, the level of use of resources outside milk would remain unaffected by the higher milk

[9] Or unless prices of commodities on which spending was lessened were lowered enough to maintain the same employment of resources in their production.

prices. But in order to improve this level the farmers, or producers of goods sold to them, would have to spend more than the increment added to their income.

The minimum price fixing of the Bituminous Coal Act may be analyzed along similar lines, with similar conclusions.[10] Although study of different situations may disclose exceptions[11]—which I must here neglect—it seems evident that schemes which raise income in a particular area by raising prices there are likely to operate against recovery. Where increases in income are desirable for reasons of decency or to stem a demoralizing reshuffling of income and demand patterns in the economy, subsidy paid out of deficit financing or from taxation of hoards is superior on economic grounds as a means of promoting a higher level of use of resources.

Under what conditions might price reductions in a particular area promote a larger employment of resources in the whole economy? Mention of several broad kinds of situation will indicate some of the possibilities. Reduction of prices of equipment with inelastic demand at prices below those currently charged would ordinarily tend to promote a higher level of use of resources in the whole economy. Equipment purchasers would be left with an increment of funds which they would have spent on equipment at the higher prices. If they or their employees or investors spent any part of this increment, the demands for other things would be increased and the use of resources improved, even on the assumption that the equipment manufacturers would have spent all of it if they had received it. The general level of use of resources would remain unimproved by lower equipment prices only in the extreme case where equipment manufacturers would spend all of this increment if they got it (through higher prices), and equipment purchasers would spend none of it if they got it (through lower prices).[12] Similar analysis and conclusions seem to apply

[10] In large measure this act represents a kind of minimum wage legislation. Prices are to cover direct costs in order to prevent competitive wage cutting. Since there seem to be some profit elements in the items of cost to be covered by minimum prices it is possible that profits may be increased, if they are not devoured by increases in competitive marketing expense. If, then, however higher coal prices bring a larger gross revenue to the coal industry, it is divided between operators and labor, and the effect will evidently be to lower the level of use of resources elsewhere unless coal producers or producers of things bought by coal miners or operators increase their expenditures by dishoarding or borrowing to an extent sufficient to offset the reduced expenditure of consumers on other things than coal and any tendency to reduction of spending by the producers of these other things.

[11] In an industry where accumulated deficits in maintenance, replacement, and modernization are large owing to continued poor profit expectations, higher prices and profits might induce an increase in gross capital expenditure which exceeded the initial decrement of spending elsewhere occasioned by the rise of prices in this industry.

[12] If demand for equipment were not perfectly inelastic, lower equipment prices would, of course, bring a little larger use of resources there without causing a decrease elsewhere. The general level of use of resources would also be but little improved by lower equipment prices if price increases outside equipment absorbed all the increment of additional spending outside equipment, without any increase in use of resources in that outside area. But wherever considerable unused capacity exists there is a presumption that prices will not be raised substantially merely on account of an increase in demand.

in the case of consumer goods with inelastic demand at lower prices—perhaps such things as cigarettes, gasoline, and broad groups of food products or clothing. In so far as ultimate consumers are less likely to hoard than business firms, price reductions on consumer goods might tend to increase total spending in greater degree than reductions in equipment prices.

The other cases involve products with elastic demand at lower prices. In many cases of this sort price reductions in a particular area will promote greater use of resources in the whole economy only if they stimulate an increase in the total spending of the economy. Otherwise the result may be merely an offsetting shift in the use of resources between different areas. Where the larger consumption attending lower prices induces additional spending by producers on expansion or modernization, the general employment of resources will be improved, unless an equal decrement of spending on equipment results where demands have dropped. Again, if the shift in spending between areas transfers income to areas where it is spent faster, use of resources should be enlarged. Finally, if demand is elastic at lower prices because purchasers will dishoard or borrow, total spending will be increased by price reductions. Examples of the latter case may be found in expensive consumer durable goods and, under some circumstances, in capital equipment.

The conclusions of the preceding paragraph rest on the assumption that prices of other things, outside the area of the initial price reduction, are not affected. This assumption is probably correct where the reduction of demands outside this area—consequent on increased spending within this area—is spread thinly over many products, or wherever policies of price inflexibility are followed. If, however, an initial price reduction on one commodity precipitates price reductions on other commodities with the result that in the whole area covered by this chain of price reductions no more is spent than would have been spent if these prices had all remained higher, then the level of use of resources in the whole community would be improved without any increase in total spending in the community.

It is clear that if public price control in a particular area is to be successful in promoting a higher general level of use of resources, standards must be formulated in terms of the relation of price changes inside the area to changes in spending, hoarding, incomes, prices, and employment of resources both outside and inside this area. These are terms very different from those of the customary standards related to the problem of promoting the best allocation of resources and preventing monopoly profits. Timing would be important, for we are roughly aware of changes in elasticities of demand and changes in propensities to hoard and to spend. Where the purpose is to reduce spending in a given area, the area

of price reductions must cover all close substitutes. Where complementary materials are involved, as in construction, elasticity of demand would emerge only with extension of control to all the materials. In many areas it may be impossible to assess the probabilities with enough assurance to justify public action. But it should be possible to discover some areas where price reductions would be very likely to promote an increase in the general level of use of resources, especially as we learn more about flows of income and spending and patterns of resource use. The recent advances made by the staffs of the National Resources Board and the Federal reserve system, by Professor Leontief, and, on utility rates, by Professor Sumner, are encouraging.[13]

Where substantial reductions in prices were called for, price fixing by an administrative commission would be among the least effective alternatives. Even if the law of confiscation were drastically modified, business managements and investors would be belligerent in the face of orders to reduce prices drastically. It is scarcely to be doubted that organized labor would often join in the opposition. Moreover, commission procedures are ill-adapted for nice timing. Competition by a government corporation could achieve the immediate objective of lowered prices, but the end result might often be abandonment of the field by private enterprise. There is little reason to think that either collective bargaining or a functional authority would go far in relating prices to the standards relevant to this problem. Public monopoly in appropriate industries—key industries from the standpoint of this problem—and public subsidy to private enterprise obviously constitute the most effective instruments for achieving the objective.

Subsidy could take the form of a guarantee of minimum earnings in return for a price policy determined by public authorities according to standards of the probable total effects in the whole economy. Only through subsidy or public monopoly could prices be reduced below incremental costs without diminishing employment of resources inside the area. Yet it would be mere coincidence if the minimum desirable price from the standpoint of the total effect on the general level of use of resources were just equal to incremental cost or were above it.

Output control in particular areas promises little aid in improving the level of use of resources. Control of gross capital expenditure of business enterprises would be highly significant. Standards for desirable volumes of investment and the forms it takes should be related to the direct effects

[13] E.g., *Patterns of Resource Use* and *The Structure of the American Economy*, Part I, National Resources Board; Wassily W. Leontief, "Quantitative Input and Output Relations in the Economic System of the U. S.," *Review of Economic Statistics*, XVIII (August, 1936), 105 and "Interrelation of Prices, Output, Savings, and Investment," *ibid.*, XIX (August, 1937), 109; John D. Sumner, "Public Utility Prices and the Business Cycle," *ibid.*, XXI (August, 1939), 97.

on the use of resources in the investing industry and in particular equipment industries and to the indirect effects in increased spending elsewhere. The worth to the community of an increment of investment of savings or credit is the sum of the resulting additions to national income where it is invested and elsewhere. The indirect addition to national income may be large though the direct addition where it is invested is small. Use of such criteria in control of gross capital spending might lead in some areas to much "overinvestment" according to the traditional test relevant to the problem of best allocation of resources which will all be used anyway; but this latter criterion is not applicable until we approach full use.[14] Studies of patterns of resource use, and of the relative effects of spending in this, that, or the other direction, encourage the view that it may be possible to arrive at concrete estimates sufficiently satisfactory so that control of investment could improve the rate of use of resources.

With regard to types of control for investment we must conclude, as in the case of price control, that public monopoly and subsidy are the two most effective instruments. If it is considered desirable to preserve private enterprise in key areas, public guarantee of certain minimum earnings might be effective in expanding private investment. Or government might directly invest some public funds in non-interest bearing securities of private corporations which agreed to spend them on new equipment.

IV

I now leave the confusing wilderness of the full use problem and proceed along familiar roads that have an illusive firmness and direction —until one finds himself knee deep in macadam or wondering around traffic circles which seem to have lost their outlets. If we ignore repercussions on the general level of use of resources, attainment of high economic efficiency consists of correcting and preventing overinvestment and underinvestment of economic resources, improving the utilization of resources already committed, and securing a high rate of progressiveness. I shall treat public control in relation to two aspects of this problem: the general level of prices, or average revenue, of a firm or group of firms, and the structure of prices to different classes of consumers.

Aside from antitrust control, and recent ventures in federal ownership, experience in the United States with public control in relation to this problem has been confined chiefly to commission regulation. Although few factual studies of the results of public utility regulation have been made, there is little doubt that, in the main, they have not been very satisfactory, except in control of investment in operating properties. There is no need to rehearse the flounderings of many judges or the failure of most

[14] As full use is approached, the indirect worth—the addition elsewhere to national income caused by an increment of investment here—becomes less.

commissions to develop effective standards and present them to the courts with clarity and vigor. Let us pause merely to say in the spirit of the season, "God rest ye, merry gentlemen, and be not dismayed by the reflection that if all your pens had been harnessed to service-at-cost generators, we should now have cheaper electricity."

Regulation of the general rate level or average revenue, under the judicial rule of fair return in each year on present value, has exhibited two major defects. There has often been a confusion between considerations of fairness to vested interests and standards of economic efficiency. It must be recognized both that true standards of efficiency can only be developed apart from considerations of fairness to vested interests and that application of these standards should be tempered, during an appropriate period following their adoption, by criteria of fairness to past commitments of capital and labor made on other expectations.

Secondly, regulatory authorities have often erred in making a determined effort to reproduce in actuality the kind of relations between investment, prices, and profits depicted in the long-run, static equilibria of economic theory. The faultiness of this attempt has, perhaps, been obscured by its failure to produce palpably absurd results in the case of those public utilities which have enjoyed a steadily increasing demand marred only by small backward fluctuations. In the last ten years the railroads have not seriously demanded normal returns on actual dollar investment or on reproduction cost, because it was clear that they could not be obtained with any rate schedule. A moment's consideration of the results of an endeavor to produce these equilibrium results in concrete actuality during any length of period in durable goods industries will demonstrate the ridiculousness of this approach. In reality, except by chance, the economist's static equilibria, whether competitive or monopolistic, never exist anywhere or in any period outside the expectations of men—and sometimes these are dreams. If public control of one sort or another is to achieve market results representing a high degree of economic efficiency from the standpoint of the community, it must not try to reproduce the static equilibria as actual averages of results in a short period or in a longer period including good years and bad.[15] It must become at least as sophisticated as those businessmen who laugh at the assumptions of perfect knowledge, smooth demand and cost curves, and static conditions.

Omitting consideration of redistribution of income by provision of necessary services or commodities to the poor at prices below costs, the guiding principles of efficiency to be used in all areas, whatever the kind of control, are well known. No unit of homogeneous resources should

[15] Cf. the acute observations of Melvin G. de Chazeau on the error of deriving actual rates from any kind of cost-determined "rate base." "The Nature of the 'Rate Base' in the Regulation of Public Utilities," *Quarterly Journal of Economics*, LI (February, 1937), 303 ff.

be introduced where its value to consumers is less than in some other use, and output in each area should always be such that a further increment would not be worth to consumers the cost of producing it. In the endeavor to translate these principles into workable standards two problems are encountered. Standards must be expressed in terms of concrete measurable quantities, and refinements or modifications of the broad principles must be made to fit particular situations. Clearly such standards can be developed only by intensive study of the facts in particular areas.

Concrete, workable standards for changes in investment in a particular area might be developed from two different approaches. One would represent an endeavor to achieve in men's expectations the theorists' equilibria, by the use of standards expressed in objective manifestations of expectations, such as stock market quotations and yields thereon, future price quotations, proposals or applications by businessmen to change prices or investment, and proposals of bankers to underwrite new securities. An example of this would be a set of standard price differentials of common stocks of different companies, reflecting differences in risk, capital structures, and dividend policies. Marked divergence from the standard differentials would, in the absence of explanations of a "technical" market nature, be considered evidence of the desirability of a change in the rates of flow of new savings into these companies. The other approach would involve empirical construction of a model of desirable market results for a given area, exhibiting averages over periods of differing lengths. Actual achieved results would then be made to conform, as closely as possible, to the averages of the model. I suspect that if two sets of persons embarked on these two approaches they would shortly find themselves doing many things in common.

Application of the basic criterion of short-run efficiency—prices equal to incremental or marginal costs—presents several problems. Maximum prices fixed by public authority according to this standard would often be illegal under the present law of confiscation. Present accounting practices in most firms are probably not well suited to calculation of incremental costs. But the studies of Professors Dean and Yntema, and experience in public utilities, suggest that procedures for satisfactory calculation would now be far advanced in many industries if accountants had spent on this problem half the effort they have expended on the less sensible problem of allocating overhead to get full unit cost.

The difficult problems in modification of this criterion to fit particular areas arise because the standard of short-run pricing necessarily affects the expectations upon which changes in investment occur. The short-run criterion is basic, both for short-run and long-run efficiency. Indeed, overinvestment may be conceived as a condition such that, when prices are kept equal to incremental costs, profit expectations are too low to attract new

capital. In areas where overinvestment is not unavoidable, being due merely to monopolistic pricing unaccompanied by effective barriers to the entry of additional resources, prevention of overinvestment requires short-run prices close to incremental costs. In the case of overinvestment resulting from a persistent decline in demand, prices equal to incremental costs would seem ordinarily to promote more rapid elimination of excess investment than higher prices.[16] Where there is underinvestment, because firms typically wait to expand until short-run incremental cost actually exceeds long-run incremental cost, including capital charges on additional equipment, the latter is the proper standard.

Where continuous overinvestment is unavoidable, with increasing or stationary demand, prices must ordinarily exceed incremental costs in order to yield expectations of sufficient earnings on new investment to attract additional savings. I consider overinvestment to be unavoidable whenever technological conditions and demand characteristics are such that maximum efficiency requires an amount of investment that will not ordinarily be fully used, even with prices equal to incremental cost. A familiar example is presented by some public utilities where the necessary facilities are often not fully used even at times of peak load. Another instance may exist in the following combination of cost and demand conditions. Incremental cost for the individual firm after reaching its minimum point continues nearly constant for a long range of output almost up to the limit of production that is physically possible and then balloons skyward on the last few units. There are some indications that the incremental cost function in steel production is of this nature. Where such cost conditions are combined with great flunctuations in demand, prices may need to be somewhat above incremental cost most of the time in order to keep expectations of earnings on new investment high enough to attract capital—unless consumers and government are willing to permit enormous price increases and immense earnings in a few years of each cycle.[17] Otherwise there would have to be some overinvestment in order to serve demand in peak years at "reasonable" prices. Study of actual incremental cost functions and of demand may disclose other types of situation in which overinvestment is unavoidable and in which prices should ordinarily exceed incremental costs.

Wherever that is true it is necessary to calculate a differential by which price should exceed incremental cost. Changes in technological conditions or in investors' prejudices would require changes in this differential from time to time, but it should not be altered on account of variations

[16] The possibility exists that somewhat higher prices and earnings might enable some firms to obtain capital for improvements, adoption of which would lead to more rapid elimination of excess capacity.

[17] This might ordinarily lead to excessive new investment at such times, unless new investment was limited by government.

in output. The purpose of this differential is not to bring a fair return on the whole investment in every year. Rather, the differential represents a kind of index of the extra earnings per unit, over and above the sums which would accrue with price equal to incremental cost, that are necessary because some minimum of overinvestment is unavoidable, in order to maintain expectations of earnings that will attract capital.

There is little point in discussing possible difficulties in using the incremental cost standard in markets containing several or many firms until we have more knowledge of the nature of incremental cost functions. But as long as consumption is to be rationed by price, there is probably no need for any bulk-line cost standard. I shall leave to my commentators the question of the relations between the incremental cost standard and delivered prices.

I have time for only a few words about standards for the pattern of prices of a firm or in an industry where different products are sold or the possibility exists of charging different prices to different consumers of the same product. Here, again, the most difficult problem is posed by the case of unavoidable overinvestment with regard to peak demands. Under such circumstances average revenue should exceed the average of incremental costs of serving different consumers by enough to enable attraction of new savings. The pattern of prices should be designed to give the maximum possible utilization of capacity consistent with obtaining the required revenue. This kind of problem has always faced public utility commissions in the task of spreading the "fair return overhead" among several classes of consumers, but they have given it much less attention than the problem of the general rate level and earnings. In large degree they have, indeed, tried to prevent rates below incremental costs. Some of the best commissions seem to have had maximum possible utilization of capacity as a goal, but it is doubtful that they have achieved it. In ordering rate reductions to eliminate excess profits, they usually compute the appropriate rate reduction on the basis of current consumption with little, if any, allowance for any elasticity of demand; and in deciding which rates to reduce, they take into consideration the relative volume of protests from different classes of consumers. In short, considerations of equity or fairness as between classes of consumers are mixed with an assumption that all demands are perfectly inelastic.

Plainly, maximum efficiency would require that excess profits be eliminated by reductions in price to those classes of consumers whose demands are more elastic.[18] Consumers with the less elastic demands should not have reductions until the prices to those with the more elastic demands have been reduced all the way to incremental costs. Only thus can utilization of capacity, consumption, and employment in the firm or industry

[18] Cf. C. Emery Troxel, *American Economic Review,* XXVIII (June, 1938), 289.

attain the maximum consistent with expectations sufficient to attract capital and prices all of which cover incremental costs.

What particular combinations of control devices and control agencies might be most effective in applying these standards of efficiency for the traditional problem of allocation and utilization? Let us consider three broad classes of market situation bearing in mind that a much more elaborate and refined market classification is actually necessary. In the first class of market situation the competitive forces are strong enough, as a result of effective application of the antitrust laws, to keep prices quite close to incremental costs most of the time, but unavoidable overinvestment persists owing to poor knowledge or errors of optimism. If provision of more accurate and adequate information on market conditions by trade associations and government agencies is not sufficient to prevent overinvestment, a public commission might be empowered to pass on all applications for new investment in markets of this sort. Additional investment should be permitted only on a showing of probability that some increment of production could be replaced at a lower incremental cost including the capital costs of the proposed new equipment; or when underinvestment was imminent, as shown by studies of market data, by the character of proposals by businessmen and bankers, and by the movement of security prices. Such control of investment would be facilitated if the commission were also empowered to develop for firms in each class of market a standard type of security structure with a range of permissible variations. I am inclined to think that control of investment and security structures is something for which a government commission is much better suited than control of prices and incomes. The possibilities of this kind of control, as an alternative to the oft-urged cartelization, have not been sufficiently explored.

The second sort of market situation to which I refer is that where the firm or firms in the market can, in spite of all that antitrust enforcement is able to accomplish, hold prices considerably above incremental costs, but do not have power to limit the introduction of new investment—with the result that overinvestment may be chronic. These conditions are found, with numerous variations in degree, in most of the public utilities and probably in several major industrial markets. Here the objective of public control is twofold: to prevent overinvestment or restrict it to the unavoidable minimum required by the conditions of technology and demand, and to keep prices close to incremental costs, plus an appropriate differential in instances of unavoidable overinvestment. Limitation of investment by an investment control commission, as in the case treated above, could prevent overinvestment, especially if supplemented by an undistributed profits tax, but could not lower prices. Let us consider briefly several alternatives for control of both investment and prices. If public monopoly can avoid deleterious political influences and administration by the inefficient bogeymen who haunt

the textbooks, it obviously possesses the greatest promise from the standpoint of achievement of maximum efficiency with given techniques and products. However, in an industry where there exist great potentialities of progressive improvements in technique and of adaptation of the basic product to new uses, public monopoly might be much inferior to the other alternatives. This is not merely a matter of personnel. Perhaps more important is the problem of the costs of obsolescence. In private industry these costs can be and are in considerable measure shifted onto investors. With public monopoly this would be difficult, perhaps impossible. The other possibilities are shifting these costs to taxpayers, or to consumers in the form of diminished progressiveness and higher prices. The latter method might often be chosen.

The record of commission regulation of investment, prices, and earnings could undoubtedly be much improved, with appropriate changes in the law of confiscation to permit the use of the criteria of efficiency sketched above and with better development of concrete standards for applying these criteria. Public commissions are, however, nearly impotent in getting new things done in contrast to preventing the doing of old things. Where high efficiency demands the realization of potentialities of cost-reducing techniques or improvement and adaptation of products for more effective competition with substitutes (as in the case of electricity and rail transport), a regulatory commission cannot, by orders and suggestions, get these things done. Public monopoly can do such things directly, subject to limitations mentioned above.

Where there is room in the market for several efficient firms a government corporation competing with private enterprise might yield better results than either public monopoly or commission regulation. If positive things of the sort just mentioned needed to be done, the government corporation could do enough of them to stimulate the private companies to more vigorous efforts. Officials of a government corporation operating in the market should have a better knowledge of the conditions in the market than a commission can obtain; and they could by their own policies so alter the market data facing the private companies as to force the latter for their own advantage to adopt the most efficient rates of output and prices. If the standards here advocated were skillfully used, private companies would have no logical reason, from the standpoint of profit expectations, to abandon the field, for expectations would be kept at a level that would attract capital as demand expanded. The private companies would, of course, need assurance by law and by experience with the policies of the government enterprise that this would be true. Overinvestment could be prevented by agreement between the government corporation and its private competitors, and waste in marketing expense could be diminished by the same device.

The possibilities for attainment of high economic efficiency through col-

lective bargaining by representatives of various parties at interest need extended analysis which has not, so far as I know, been supplied by its proponents. Since it would ordinarily produce compromise, the nature of which would depend on the relative power and skill of the bargainers, there seems little reason to think that the market results would usually approximate the standards of economic efficiency. The results with a functional authority would also constitute a compromise, which might or might not be closer to these standards depending on the powers and ability of the government representatives. Even though they yielded results diverging substantially from standards of high efficiency, these kinds of control might, however, produce a better balance of democracy and efficiency.[19]

A third type of market situation is that where underinvestment exists because firms do not compete vigorously in expansion and because barriers to entry, such as size of necessary investment, complexity of process, or established position of existing firms, cannot be eliminated by antitrust policy. Here, it would seem that the desirable addition to investment could be attained only by public competition or public monopoly. Perhaps occasional threat of one or the other might suffice to accomplish this end, in which case the problem would become that of keeping prices down to incremental costs. For this objective commission regulation should be adequate in mature industries with slow growth of demand and no great potentialities of technological progress.

V

In conclusion I wish to emphasize five points:

1. There may often be a conflict between objectives and standards related to raising the general level of use of resources and those appropriate for treatment of the problems of allocation and use of resources and prevention of monopoly incomes as this latter set of problems has been traditionally conceived. The former objectives and standards may call for larger investment in a given area and lower prices, or possibly higher prices, than the latter. Also, if incomes in a particular area are to be raised without impairing both the general employment of resources and an efficient volume of output in that area, devices other than minimum price-fixing must ordinarily be used.

2. Several types of control suitable to treat the older set of problems would probably be ineffective in raising the general level of use of resources.

3. As a basis for any comprehensive changes in public policy in market control we need much more knowledge of market structures, policies, and results in particular areas and much more study of the probable economic effects of alternative kinds of control. Research organizations and individ-

[19] See above, end of section II.

ROUND TABLE ON PRESERVING COMPETITION VERSUS REGULATING MONOPOLY

EDWARD S. MASON, *Chairman*

This round table was devoted to the discussion of papers presented at the morning session on competition and monopoly, in which the following participated: Jerome Frank, Leon Henderson, Melvin de Chazeau, Milton Katz, and Saul Nelson. Summaries of remarks were prepared by the participants, except for the first two speakers.

JEROME FRANK, the first speaker, admitted the widespread existence of positions of monopoly power but considered the antitrust laws by no means a uniformly successful method of destroying these positions or of preserving competition. Conditions in most mass production industries are such as to make antitrust action impotent. Nor has there been any considerable public demand for antitrust action visible in the correspondence of the TNEC. It is widely recognized at present that there are important and subtle differences between the organization of resources in different industries. The belief that these differences can all be reduced to a common denominator through the application of the antitrust acts is just an "imaginative bedtime story for tired economists."

LEON HENDERSON, the second speaker, attributed to monopolistic restrictions an important part in the continuance of unemployment. The supposed evils of excessive competition he did not consider to be particularly terrifying. Nor was he worried over the destruction of investment in industry if the country should decide that "whether as a way of life or as an economic policy monopoly should not exist."

MELVIN DE CHAZEAU: Mr. Edwards rightly limits the scope of the discussion to the following universe of discourse: (1) In technical terminology, attainable competition is neither "perfect" nor "pure" but must remain monopolistic. It is "oligopolistic" situations which are the proper objects of antitrust policy. (2) Size of individual firms, the heart of the question, does not necessarily bring efficiency. Individual expansion in the face of competition is a self-limiting process but growth through absorption of existing firms is not. If conditions are oligopolistic, of course, the former is not necessarily true and fusion may increase efficiency; but the burden of proof is on the company. (3) The antitrust policy has hardly been tried and, therefore, cannot be said to have failed.

In advocating a rejuvenation of antitrust policy, Mr. Edwards recognizes that, since legislative and judicial trends over the last half century have condoned, if not stimulated, oligopolistic situations, a reversal of policy would require reshaping by law a considerable part of the industrial structure of the United States. Thus, in practice, policy may be limited to restriction of future growth with ultimate adjustment through technological change and shifting markets. To the extent that oligopolistic policies are contrary to public interest, especially in the attainment of full use of resources, therefore, it is not possible for us, the living, to rely exclusively on the antitrust laws for a solution of the problem even

though the necessary scope of public intervention in the long run may be increasingly limited (i.e., to that indeterminate number of industries in which oligopoly is a function of the inherent economic characteristics of production and distribution).

My further remarks will be confined to the problem of full use of resources as it may be obstructed by the price and investment policies of oligopolistic industries. The reasons for and the relative desirability of rigid and flexible prices are neglected as being beyond the scope of the subject under discussion.

The conflict of private and social interests in price policy is best illustrated with reference to the concept of demand. Recent industry studies of the short-run price elasticity of market demand, on the assumption that other things are equal, indicate a relatively low elasticity (in steel, substantially less than unity). This is to be expected and, given the short-run strength of consumption habits, obstacles to substitution such as technological conditions involving product design, labor skills, and installed equipment, and the joint demand for complementary goods, it is likely to be characteristic for most goods, especially for producers goods. If market conditions are aggressively competitive price-wise and there is a tendency to full use of resources, this relative inelasticity is a matter of indifference since it is the cross-elasticity of demand (i.e., the price elasticity of the individual demand curve, *ceteris paribus*), not the elasticity of market demand which governs policy for the individual firm. But in a state of facts in which cross-elasticity thus defined is not a factor in individual price policy (i.e., the characteristic oligopolistic situation), there is both economic error and conflict between private and public policy in this interpretation of demand. In the absence of full use of resources, there is error in the assumption of *ceteris paribus*. The criterion of desirable price is not short-run price elasticity of demand but the impact of price (that is, expenditure) on national income and investment and consequently on shifts in the entire demand curve. Both conflict and error are demonstrated by Mr. Wallace's theoretical conclusion that it is primarily in those instances in which market demand is relatively inelastic that a price reduction is most likely to promote fuller use of resources. Conversely, where demand is elastic, a price reduction has possible but dubious merit in promoting full use. Thus a high price policy in such instances brings upon industry the disaster it seeks to avoid—idle capital, unemployment, and business losses. But to follow any other policy, unless some simultaneity among industries could be assured, might well bankrupt the firm, no matter how large, that attempted it. This is the paradoxical situation which requires some form of public intervention if full use of resources is to be attained.

Except in those instances in which inherent economic conditions and existing law will permit such an increase in the number of sellers that cross-elasticity of individual demand rather than price elasticity of market demand governs individual pricing decisions, the antitrust policy must prove impotent for the solution of the problem under discussion. Still retaining the law as a collateral policy, therefore, it is necessary for economists and public administrators alike to devise a positive program for industries excluded from this category.

The successful implementation of a socially desirable pricing policy, through any one of the alternatives discussed by Mr. Wallace, requires a predetermina-

tion of (1) the timing of major price changes, (2) the potentially possible amounts of price change, (3) the investment schedule (gross and net) of major firms, and (4) a monetary and public works (including public utility) program integrated with the desirable price policy; that is, simultaneity of action across industry and commodity lines is essential. The nature of this project requires authority beyond that available to agencies other than the federal government. Until such criteria of desirable price policies, as well as such an integrated program, have been devised, criticism of business price policy (based as it must be on an atomistic point of view) is negative, *ex post facto* kibitzing that can hardly be expected to bring fruitful results. Since no such criterion or policy has been defined, it is not fair to conclude that the co-operation of business has failed. It has hardly been solicited.

Rather than to embark on direct control of price or investment through subsidies or guarantee of earnings or indirect control through government competition, each of which, in addition to the determination of criteria mentioned above, involves almost inevitably a thorough regulation (or regimentation) of industry (cost, investment, and price) of dubious merit, I urge the desirability of a study (collateral with the antitrust policy) of the problem of desirable price and investment policies by an independent agency which will seek to modify individual decisions in socially desirable directions. Once it has failed, it is time enough to consider direct intervention, government competition, or public monopoly.

MILTON KATZ: In the papers presented this morning and in the discussion this afternoon, the antitrust laws have been treated primarily as the symbol of an economic philosophy and a way of life. It may be helpful to consider the antitrust laws as an instrument, fashioned for specific purposes out of the legal materials which happened to be available in 1890 and in 1914.

The effectiveness of the instrument has been under examination here. Since effectiveness must be measured in terms of realization of purpose, it may be timely to re-examine the record in order to rediscover the purposes which the framers of the laws and the body of public opinion supporting them were seeking to accomplish. The record is an ample one. It can be found in hearings before committees of Congress, in reports of committees, and in debates in Congress, during the decade of the 1880's and a period of several years preceding 1914. In examining the record, one must be careful to resist a tendency to read into the language of the sponsors of the legislation the more sophisticated concepts of later decades.

The Sherman Act was aimed at the "trusts." This crude term, it seems to me, more accurately reflects the thinking and feeling which lay behind the Sherman Act than any other. The American public and their representatives in Congress were anxious to curb immense and powerful business interests which, as they saw it, stifled opportunity, crushed existing small enterprise, and created a vaguely felt political menace. They seem to have regarded combination and railroad rebates as the principal methods by which the trusts came into being and maintained their power. (In this connection, it is illuminating to recall that the Standard Oil Company was cited as a bogey to demonstrate the need for the

Interstate Commerce Act, in 1887, as well as for the Sherman Act, in 1890.) In the record of the 1880's, one does, of course, find references to local price cutting. The thinking of the period, however, seems to have regarded local price cutting primarily as a symptom of the destructive power arising from combination. By 1902, however, in the report of the United States Industrial Commission, one finds increasing concern manifested over "destructive competition," of which local price cutting was conceived to be the principal manifestation. In the discussion lying back of the Clayton Act and the Federal Trade Commission Act, of course, the problem of destructive competition or, to use the phrase which was eventually incorporated into the statutes, "unfair methods of competition," occupied the foreground.

Generally speaking, then, the antitrust laws were devised in order to meet the problems arising out of what we should today call concentration. More specifically, they were devised to cope with the kind of concentration which grows out of combination and unfair methods of competition.

During the current depression, a new purpose has been read into the antitrust laws. Attention has centered upon the need to promote full use of resources. There has been much concern about "rigid" prices and their relation to inadequate use of capacity. There has developed a widespread tendency to judge the effectiveness of the antitrust laws by their capacity to eliminate such obstacles to the full use of resources as may arise out of inflexible prices. (In some quarters, in fact, there even appears to be a disposition to regard the failure of American industry to operate at full capacity as proof of the "failure" of the antitrust laws.)

In considering whether the antitrust laws can be made effective, the original purposes must be considered separately from the contemporary objectives. Account must also be taken of the advances in legal and administrative technique which have taken place in the half-century since the Sherman Act was adopted, and in the quarter-century since the Clayton Act and the Federal Trade Commission Act became law. The draftsmen of these statutes did, it is true, make resourceful use of the legal art of their time. The Sherman Act, for example, made bold and extensive use of criminal law enforcement by injunction which, while not unknown in American law in 1890, was nevertheless comparatively novel. The legislation of 1914 constituted an important step in the development of the administrative commission. Since that time, however, administrative law in America has advanced steadily toward maturity, and growth in other phases of legal technique, while less far-reaching, has been steady.

Given adequate personnnel and money and continuing public support, I see little reason to doubt that the antitrust laws, even as they stand, can be effective against combination or against local price cutting and similar business methods. Their effectiveness for these original purposes could be increased through the employment of the legal and administrative methods available today. The objectives read into the laws by current thinking and feeling, however, raise a problem of a different order. Since the laws were not made for these ends, there is good reason to doubt that, as they stand, they can be significantly helpful toward achieving these ends. It does not follow that modern economic analysis and legal technique cannot devise means of coping with these problems

consistently with the antitrust laws; i.e., within the framework of the competitive business system. The effort has not been made. If opinion in America desires that the antitrust laws be re-oriented toward the newer purposes, a careful and vigorous effort to remodel them while preserving their inner spirit might be more productive than one might guess from a consideration of their possibilities in their present form.

SAUL NELSON: I should like to interject an issue which seems important: whether the preservation of competition is or is not deemed preferable to the regulation of monopoly or whether an industry-by-industry approach should be substituted for traditional antitrust policy.

Economists, legislators, and enforcement agencies usually think of monopoly and restraint of trade in relation to the producer and to wholesale markets. While the field of distribution and of retail markets has not been ignored, it has been accorded insufficient attention.

There are a number of ways in which the pattern of competition at retail is intimately related to issues of monopoly. In the first place the successful maintenance of monopolistic positions or schemes to restrain trade by manufacturers often is dependent upon the exercise of a substantial degree of control over retail markets. For example, price uniformity at the wholesale level will not suffice to permit a "share the market" plan to operate smoothly if the product of one manufacturer is finding its way to the ultimate market at a lower price than that of his rivals. In many industries leading companies have been able to restrain their smaller rivals from cutting prices by threatening retaliatory price cuts; if a large mass distributor enters the field and contracts for the entire supply of one of these smaller companies, the danger of reprisal is eliminated and a smoothly working price-fixing scheme may be suddenly disrupted. The importance of control over resale prices to manufacturers who wish to reduce the severity of competition at the wholesale level was forcibly illustrated by the frequency with which proposed NRA codes contained provisions permitting such control. Moreover, the trade practice controls of manufacturing codes were often virtually nullified by refusal to restrict distributive channels or resale prices.

Where the product involved is a producers good, it may still be necessary to reach into the retail market for the final consumers good into which it enters. An excellent example is afforded by the current controversy between glass and paper containers for milk. The substitution of paper for glass has been retarded in many areas by the attitude of large distributors, milk drivers' unions, and local regulatory bodies. Consequently the control which patent licensing restrictions yield over the immediate market for glass milk bottles is importantly buttressed by restrictions of the retail milk market which discourages substitution.

This ability to discourage substitution by the proper integration of manufacturers' and distributors' control schemes is particularly important, since the availability of substitutes is the most effective check upon the monopolist's power. The most conspicuous illustration is the building materials industry, in which manufacturers and distributors co-operate to discourage the introduc-

tion of substitute products; in many areas labor, by adding its strength to the chain, prevents materials marketed through channels outside the combination, such as the mail order houses, from being installed or used in construction.

In addition, the pattern of distributive relations often introduces its own additional monopolistic elements, primarily in the direction of freezing distributive margins at a high level. If price rigidity is any indication of monopoly, it is notorious that rigidities at the retail level often surpass those at the wholesale level for the same commodities. This situation existed even in the absence of resale price maintenance legislation, but it has of course been fortified by it.

Price maintenance, which is now law in forty-four states, also impinges on this question of substitution. Guaranteed high margins make it unprofitable for the retailer to switch the consumer from expensive nationally-advertised merchandise to equivalent private brands; according to the *Drug Trade News,* of September 25, 1939, the Nevins drug chain in Philadelphia recently instructed its clerks to stop pushing its own brands because markups were higher on advertised merchandise. The focus of competition among manufacturers shows some signs of shifting to the guarantee of increasingly attractive margins to dealers, in order to induce them to push their product.

The so-called "unfair practices" acts as interpreted by the courts also have their monopolistic implications. Theoretically they merely prohibit sales below cost plus a small markup; in practice retail grocery associations in several states have seized the opportunity to issue periodic lists of minimum prices proclaiming that sales below these prices will be considered prima facie evidence of violation.

Finally, distribution may hold at least part of the key to the dilemma suggested by Mr. Wallace. In the case of milk, for example, a reduction in distributive margins may permit producers' income to be increased without a corresponding curtailment of consumers' purchasing power.

I suggest, therefore, that more attention be devoted to the pattern of competition in retail markets if it is desired to attack the general problem of monopoly effectively. It is encouraging to note that the Department of Justice, in its current building trades program, seems fully aware of this need.

ROUND TABLE ON THEORY OF INTERNATIONAL TRADE

FRANK D. GRAHAM, *Chairman*

At this round table papers were read by Gottfried Haberler, on "The Present Status of the Theory of International Trade,"[1] and by Wassily W. Leontief, on "The Pure Theory of Transfer." Among others, Charles R. Whittlesey and Paul T. Ellsworth participated in the discussion.

WASSILY LEONTIEF prepared the following outline of his paper:

I. *The Problem*

1. A complete analysis of all possible repercussions of one-sided international transfer of purchasing power raises a multitude of theoretical questions. Many of them have nothing else in common with each other but the fact that they all have some bearing upon the explanation of the mechanism of economic adjustments.

A Keynesian economist for example is likely to be most interested in tracing the indirect effects of additional capital supply upon the income and employment level of the borrowing country. Professor Tinbergen on the other hand would probably pay special attention to the time sequence of the various stages of ensuing adjustment processes and derive some special kind of cyclical fluctuations.

In analyzing any particular empirically given instance of international capital transfer we obviously would have to take in account all these various aspects of the problem.

2. The century-long discussion of international transfer, although it has naturally swayed from one aspect of the controversial issue to another, still seems to have been centered around one particular theoretical problem which can be referred to as the special theory of international transfer.

It is typically a problem in static economic theory and it involves a comparison of the trade relationships between two (or more) countries: (a) in conditions of completely compensated international exchange in which the value of exports of each of the trading communities is exactly balanced by the value of its imports; (b) in conditions of supplementary one-sided transfer of purchasing power, i.e., in conditions in which the imports of the borrowing country exceeds its exports by a given transferred amount, while the exports of the lending country exceed by the same amount the value of its imports.

II. *Controversial Propositions*

1. One school of thought is inclined to conclude that in consequence of one-sided transfer the (net) terms of international exchange will tend to turn in favor of the borrowing country; i.e., the prices of its exports will rise in relation to the prices of its imports.

2. Another group of theorists admits that the price relationships might be affected by international transfer of purchasing power. It denies however that the exchange ratio between the two groups of commodities is more likely to turn in favor of the capital importing country than against it.

[1] To be published in the *American Economic Review*.

Instead these writers are inclined to emphasize the proposition that in consequence of one-sided transfer, the total purchasing power of the borrowing community will increase in relation to the total purchasing power of the lending country.

3. The second school of thought has conclusively demonstrated that certain types of reaction which by some of the theorists were considered to be impossible actually can easily take place.

Extending the theoretical analysis further in the same direction it can be shown that the so-called "purchasing power theorists" are themselves mistaken in presuming that the capital transfer necessarily leads to a redistribution of purchasing power in favor of the borrowing country. On the contrary not only can the distribution of the purchasing power between the two communities be shifted in the opposite direction, but even the net, expendable real income of the lending country might in some special cases increase in direct consequence of the capital transfer.

III. *Methods of Proof*

1. In order to demonstrate that certain effects (which by some other theorist were considered to be impossible) can actually take place, it is sufficient to show the existence of these effects at least in one particular instance. So long as the theoretical assumptions upon which this particular case is constructed are admissible—even if they are not necessary—such proof obviously will have general validity. To disprove the general proposition that all cats are black it would suffice to show one single white cat.

2. Thus in his endeavor to disprove some general contention the theorist has the right to supplement the basic theoretical setup of the controversial problem by any number of additional, special assumptions.

In the theory of international trade it is very helpful to assume that the actions of all the separate consumers and producers of a country can be adequately represented by the behavior of one single individual. In the special instance in which such community consists of many identically situated producers and consumers, any one of them can adequately represent the whole aggregate. Using this very limiting, but entirely admissible for our special purpose, assumption it can be proven that one-sided capital transfer can (a) change the terms of trade in either direction; (b) redistribute the total purchasing power in either direction; and (c) increase or decrease the real income of either of the two countries.

3. Commenting on the second proposition it might be interesting to note that in their eagerness to disprove the existence of any definite price reaction many theorists are inclined to assume that the terms of trade remain during the transfer the same as they were before. In this case indeed the total purchasing power of the borrowing country will necessarily increase in relation to purchasing power of the lending community. This might explain their failure to notice the case in which the relative prices of commodities exported by the lending nations rise so much that its total purchasing power (excluding the transferred amount) increases in relation to the purchasing power (including the transferred amount) of the borrowing country.

4. The last proposition (*c*) raises an interesting theoretical question. Our

analyses shows that the real income of the lending country will increase in consequence of a loan transaction only if the slope of the market demand curve for its exports (with the signs taken in consideration) happens to be smaller than the slope of the corresponding negatively inclined supply curve.

Thus in the standard case of a negatively inclined demand and positively inclined supply curve the possibility of the forementioned reaction is excluded. On the other hand such effect appears to be inescapable in those cases in which both curves are negatively inclined, but the demand curve has a steeper slope than the supply curve. According to Marshall the equilibrium situation indicated by the crosspoint of such curves is a stable one; which means that it actually can occur. Pareto on the contrary maintains that a negatively inclined curve can lead to a stable market equilibrium only if it cuts the corresponding demand curve from above.

Thus if the Marshallian stability conditions were accepted, an international loan will increase the real income of the lender whenever the market equilibrium is established with negatively inclined supply curves. According to Pareto, on the other hand, the equilibrium conditions leading to the described effect would be essentially unstable.

IV. *The Probability Argument*

1. Once the possibility of all these different types of reactions is theoretically established, the discussion very often tends to shift to the question of probability. Infrequently the opinion is being expressed, for example, that although theoretically the terms trade might turn in either direction it is more probable that they will shift in favor of the borrowing country.

The general nature of this type of probability argument is too intricate and uncertain to be discussed at the present occasion. In some instances, however, such statements appear to be based upon certain theoretical propositions which deserve closer examination.

2. One argument is connected with the concept of similarity and dissimilarity of the economic structures of the trading nations. The term similarity has to be used in this connection in the sense of reciprocal symmetry rather than identity. If cloth occupies in the English economy exactly the same position as wine in the Portuguese economy while cloth has exactly the same position in Portugal as wine in England then it can be said that England and Portugal have reciprocally similar economic structures.

Theoretical analysis shows that introduction of conditions of reciprocal similarity does not modify in the slightest degree our previous conclusions.

None of the possible direction of various changes can be theoretically excluded on the basis of this additional assumption.

3. The actual character of such reactions will in this case be obviously determined by the (symmetrically similar) structure of the two national economies. Application of any probability criteria becomes in this instance increasingly difficult.

In view of the current discussion of this problem it might be interesting to point out that:

(a) In the simple two-commodities case and with assumption of independ-

ence of the marginal utilities of the two types of commodities the terms of trade will turn in favor of the borrowing country, if the marginal utility of exported goods decreases at the equilibrium point at a greater rate than the marginal utility of the imported goods, and vice versa. Neither the cost conditions nor the distribution of the total national expenditures between the two types of commodities has any bearing upon this particular conclusion.

(b) Introduction of purely domestic commodities does not create any presumption in favor of one particular direction of change even if the export and import commodities are assumed to be identical so far as the rates of change of their marginal utilities is concerned.

ROUND TABLE ON COLLECTIVE BARGAINING AND JOB SECURITY

GEORGE W. TAYLOR, *Chairman*

The following papers were presented at this round table: "The Seniority Problem in Mass Production Industries," by Frederick H. Harbison; "Union Policies Relating to Technological Developments," by David Weintraub and Harry Ober; and "Union Wage and Hour Policies and Employment," by Waldo E. Fisher. The abstracts presented below were prepared by the authors.

FREDERICK H. HARBISON: Labor unions, particularly those that have appeared in the mass production industries, have attempted to secure partial control over layoff, re-employment, and promotion policies by forcing employers to adhere to the seniority principle. Seniority is preference in employment based on length of service. In practice, seniority rights are modified by various competency and merit factors. The straight seniority clauses in labor agreements provide that length of service shall govern as long as the employees who are to be retained, rehired, or promoted are capable of performing available work according to minimum standards of quality and quantity. The flexible provisions, on the other hand, state that seniority shall govern only when the merit or competency factors are relatively equal.

Even under the best personnel management it is probably impossible to rate workers with sufficient accuracy to identify more than 15 per cent of any large group as distinctly superior or to identify more than 15 per cent of such a group as distinctly inferior. The less the precision in determining relative competencies of workers the more dominant the seniority principle may become. In practice, therefore, length of service is given major emphasis in determining layoffs and promotions even under the flexible type agreements.

The possible effects of the more widespread use of the seniority principle in employment relations in the mass production industries may be outlined briefly. First, one consequence of basing employment preference on length of service is an older working force. Senior employees will have job security at the expense of short-service workers who must bear the brunt of unemployment in periods of depression. Second, the continued application of the seniority principle may result in stagnation and consequent impaired efficiency of the working force. Third, the more competent workers may be discriminated against by any system that causes them to wait their turn for advancement on the basis of length of service. These arguments, however, are valid only if management has been and will be perfectly capable of determining relative competency among workers. To the degree that seniority displaces a haphazard and biased method of selecting workers for layoff and promotion, however, the efficiency of the working force as a whole may be increased rather than decreased. Furthermore, the longer experience, greater loyalty, and lower turnover of an older working force may offset the advantage of a more vigorous, yet less stable, group of employees. Indirectly, moreover, the imposition of seniority gives employers an inducement to establish higher work standards, to select new employees with greater care, and to train and maintain a working force with flexible skills and experience.

The danger of impaired efficiency comes not from a general application of the seniority principle but rather from the rigid enforcement of seniority in every individual case. Optimum efficiency might be maintained if a small minority of exceptional employees could be retained or promoted without regard to seniority. The difficulty lies not in the over-all recognition of the seniority principle, but rather in its too strict application in special cases.

Looking at the labor market as a whole a more general application of seniority may be beneficial. A seniority system tends to give permanent employment to older, long-service workers, and to create a "labor reserve" of more mobile younger workers. Yet the existence of an older working force puts a premium on hiring younger workers when new hiring is necessary. Thus, in general, the demand for new workers is focused upon the labor reserve of younger men, a condition which may, perhaps, facilitate the adjustment of supply and demand for new labor.

To a union struggling for complete recognition, control over layoff policies is important both as an organizing issue and as a protection from discrimination against union members. In the determination of merit or competency management has wide discretion over which a union can exert very little control. It is natural, therefore, that organized labor should attempt to limit management's control by forcing adherence to a clear-cut and definite formula based on length of service. In large measure the demand for rigid application of seniority is a defensive device which is of particular importance to unions whose recognition status is insecure.

Because of the difficulty of applying seniority by plants, departments, or occupational groups in such a manner as to satisfy the majority of workers, there are many indications that too rigid adherence to seniority is as troublesome to some union leaders as it is distasteful to management. Although attempts have been made to combine plant, department, and job seniority, no rigid system can be devised which will not discriminate in one way or another against particular groups of workmen. It is not surprising, therefore, that many unions have favored complete work-sharing instead of layoffs by seniority. It is significant, moreover, that several union officers have declared that there would be no necessity for rigid seniority rules in mass production industries under a preferential or union shop.

It is quite possible that the restrictions of rigid seniority might be largely alleviated through more complete acceptance of unions and joint determination of competency by union and management representatives. Some employers, who have signed labor agreements, are still combating outside labor unions. Many companies, furthermore, are developing merit or ability rating programs in order to implement what they think of as management prerogatives of determining competency without interference from union leaders. Both policies, it appears, are bound to force the unions to demand more rigid application of seniority to limit management's control over layoffs and promotions. When a struggling union is obliged to constantly demonstrate its value by offering job-conscious workers greater security, it cannot ask its members to rely on management discretion of relative competencies of employees. If unions are accorded some degree of joint control in judgment of competency, the basis for rigid seniority may disappear. On the other hand, the experience of the railroads has shown that if rigid seniority rules are once accepted by an employer, they tend

to become a permanent feature of employment policy accepted by both sides in spite of the fact that more co-operative relations between management and the union may have developed in the meantime. The great danger of seniority rules, which have been developed as a defense measure to meet an organization problem, is that in their application they tend to become more detailed and all-inclusive, for workers learn to look upon seniority rights as vested interests. In the end, therefore, neither management nor the union has control of employment policies, for such policies become dependent on a law or formula rather than on the process of collective bargaining.

David Weintraub and Harry Ober: Changes in industrial processes involve changes in the organization of the labor force. Whether the result of mechanical innovations or managerial improvements, such changes may decrease or increase the size of the labor force required, or alter its composition, or change the conditions under which it works. In any case they affect the relationships in which the individual worker stands to his job in terms of tenure, skill required, work loads, wage rates, and other conditions of work.

In the course of our modern industrial development attention to the problems created by technological changes was first attracted as a result of the direct displacement of skilled workers by machines. Mechanization of manual skilled occupations has, however, in most instances been only the forerunner of a whole series of minor technological innovations as, for example, improvements in designs and speeds of machines, a higher degree of automatization, and minor, day-to-day improvements in operations. In a less dramatic form, these changes continued to do away with some operations, to make others automatic, to combine groups of operations, and to separate skilled and unskilled manipulations so that the latter could be transferred to new and specialized occupations. The cumulative effects of such minor improvements have, over a period of time, frequently outweighed the more revolutionary changes in their direct impact on skills and occupational requirements. Moreover, with the extension of mass-production methods to an ever wider portion of industry and the trend toward mechanization and automatization of handling and conveying operations, the security of the unskilled, too, has been becoming more precarious. Although, in general, changes in which the production process is completely converted from manual operations to machine methods are becoming less and less frequent, opportunities for further technological improvements have become more extensive rather than restricted; and the modification of skills and occupational requirements has been taking place in a broader field.

The impact of technological changes on the volume and character of labor required is, however, not always direct and immediate. For example, industrial relocation following from technological change sometimes takes the form of new, highly efficient plants in new communities, and the creation of an excess capacity, which, through competitive pressure in the market as a whole, produces unemployment and shutdowns in the old communities.

Trade unions are increasingly recognizing that modern industrial conditions do not permit the separation of problems concerning displacement by technological changes from the problems of wage rates, work loads, speed of operation,

job tenure, and all other conditions of work; and that these questions, in turn, cannot be dealt with effectively on the basis of individual plants or operations but must be approached in terms of the general economic context of each industry. Depending, therefore, upon the nature of the bargain that trade unions have been able to make in specific instances, their policies toward technological changes have varied all the way from opposition to changes to acceptance and co-operation with management in their introduction.

Once labor standards have been established, trade unions not only try to maintain and improve them but of necessity must guard against any influence which tends to obscure them, since such influences facilitate the deterioration of standards and their eventual collapse. Technological changes have constituted such an influence, especially the unspectacular and seemingly unimportant modifications of tasks which, cumulatively, can have considerable effects on work loads, earnings, and other conditions of work. In order to meet these changing conditions, a number of specific union policies have grown up; e.g., those dealing with union jurisdiction over and placing of personnel in new or changed occupations, rates of pay in new occupations or on modified operations, work loads, transfer of workers affected to other jobs, retraining, regulation of the rate of introduction of technological changes, modification of hiring policies, selection of individuals whose work status is to be changed, and dismissal compensation.

These union measures are indicative of at least two things: first, a general tendency to develop, without opposing change as a policy, an ever wider range of measures that provide a basis for negotiations, and, second, an increasing application of general trade union policies to problems that arise from technological changes, as the relationship of such changes to the general question of job and income security gains recognition.

The adoption of measures for counteracting the insecurity incident to technological changes usually involves either a direct expense or a deferment of the realization of economies made possible by changes in techniques of production. Trade unions have generally recognized this, but they have argued that because technological changes afford economies to the employers who introduce them, the workers employed in the industries affected by such changes should share in the benefits derived from such economies.

The effects of technological changes are usually not confined to individual plants, and the success with which organized workers have been able to maintain and improve their working conditions has depended to a large extent on whether or not they have been able to establish and maintain fairly uniform labor standards over the entire area of the "competitive market." By the introduction and maintenance of approximately uniform labor standards on an industry-wide basis, or on the basis of that segment of an industry which operates in the same competitive market, collective bargaining performs a dual function: it makes possible the adoption of measures designed to counteract the insecurities which result from teachnological changes and, by removing labor standards from the field of competition, it aids in the stabilization of operations in industry. The need for the performance of the first function has been more and more frequently recognized by private and public mediation and arbitration agencies in the reasoning under-

lying specific awards. The second function, too, has been increasingly appreciated as industry after industry has found labor's co-operation in the removal of differences in conditions of employment from the sphere of competition to be an aid to industrial stabilization.

WALDO E. FISHER:[1] There is no one wage and hour policy to which all unions subscribe. As a rule unions like most employers sell their product at the best price and under the best conditions that they can obtain. What price unions can command depends upon many factors, important among which are the profitableness of the industry, the bargaining power of the union, the degree of competition and overdevelopment, and general business conditions.

That wage and hour levels and policies differ widely is shown by the following figures. In 71 of the manufacturing industries reporting to the Bureau of Labor Statistics increases in hourly earnings ranged from 20 per cent (in book and job printing and publishing) to 105 per cent (in sawmills) between May, 1933, and May, 1939. About 48 per cent of these 71 industries showed increases of 50 per cent or more.

In the same period average actual hours of work per week also show wide variations. About 38 per cent of the 71 industries show increases in hours per week, but nearly all of these are durable goods industries whose output in 1933 was probably more restricted in the depression than was the output of nondurable goods industries. In the remaining 62 per cent of the industries the reduction in weekly hours ranged from 1 to 33 per cent. Of these 44 industries, 22 showed reductions of less than 10 per cent, 15 between 10 and 20 per cent, and 6 between 20 and 30 per cent.

Between May, 1933, and May, 1939, average hourly earnings for 87 manufacturing industries reporting to the Bureau of Labor Statistics showed an average increase of about 53 per cent, and weekly hours of work showed an average reduction of about 7 per cent. Comparable figures for 1929 are not available. Data published by the National Industrial Conference Board for 25 manufacturing industries, however, show that between May, 1929, and May, 1939, hourly earnings increased by about 22 per cent and weekly hours decreased about 25 per cent.

What may happen when hours of work are sharply curtailed and the rates of pay are substantially increased is disclosed by a recent study of developments in the bituminous coal industry.[2] In April, 1934, daily hours in this industry were reduced from 8 to 7 and weekly hours from 40 to 35. At the same time wages were increased by about 22 per cent. The immediate effects (within a period of nine to twelve months) were as follows:

1. Increases in all major cost items, but especially in labor costs (18.5 per cent), selling expenses (19.6 per cent), supplies (12.6 per cent), and total reported costs (14.5 per cent).
2. Increases in average sales income per ton (18.3 per cent) that were greater

[1] Paper on "Union Wage and Hour Policies and Employment," to be published in the June issue of the *American Economic Review*.

[2] *See* Waldo E. Fisher, *Economic Consequences of the Seven-Hour Day and Wages Changes in the Bituminous Coal Industry* (University of Pennsylvania Press, 1939).

than those required to absorb the additions to the total cost (14.5 per cent).[3]

3. Increases in operators' margins that placed all but three of the reporting fields east of the Mississippi River in a better financial position. The average margin rose from about 4 cents a ton to about 11 cents, an increase of 7 cents a ton.
4. A material reduction in output per man per day, a reduction of about 10 per cent below the 1934 productivity.
5. A substantial increase (about 8 per cent) in man-days worked per million tons of coal mined.
6. A substantial increase (about 15 per cent) in the per capita income of full-time wage earners per 200-days worked.
7. A very material increase (about 35 per cent) in the total wage bill per million tons mined.

The economic consequences of the 1934 agreement (plus later wage increases) over a period of three years, 1935 to 1937 inclusive, may be summarized as follows:

1. A sharp increase in the introduction of mechanical loading devices. The proportion of deep mined coal that was loaded mechanically increased from about 12 per cent in 1933 to about 20 per cent in 1937, an increase of about 64 per cent. It is impossible, however, to say just how much of this increase was due exclusively to the wage and hour changes.
2. A steady increase in the output per man per day, from 4.30 tons in the twelve months after March, 1934, to 4.69 tons in the year 1937.
3. A loss in most of the gains in employment as measured by man-days per million tons produced. Although this indicator rose 8 per cent in 1934, it subsequently declined until in 1937 it was only about 1½ per cent above 1933.
4. Further material increases in both per capita income of full-time wage earners per 200-days worked (in 1937 about 36 per cent above 1933) and in the total wage bill per million tons of coal produced (in 1937 about 46 per cent above 1933).

A comparison of developments in this industry between February-March, 1937, and February-March, 1929, disclosed that although production during these months in 1937 was about 7 per cent above the production in comparable months in 1929 and hourly earnings of all wage earners were about 20 per cent higher, money pay rolls were still 11 per cent below and real pay rolls only 5.5 per cent higher.

It is disturbing to discover that despite a reduction in standard daily hours from 8 to 7 and weekly hours from 48 to 35, the number of wage earners employed by the bituminous coal industry was still 1.2 per cent below corresponding months in 1929. Thus a 20 per cent increase in hourly earnings was accompanied by a loss of 11 per cent in money pay rolls, but, because cost of living did not rise proportionately, a 5.5 per cent increase in real pay rolls. Moreover, a 16 per cent decrease in weekly hours of work failed to maintain a level of

[3] It should be noted that the increase in sales income was made possible by the power granted to the NRA Code Authority to regulate prices under the supervision of the federal government.

employment equal to that in 1929 when production was about 7 per cent below its 1937 level.

What does a comparison of employment and pay roll data for 25 manufacturing industries show? Between October, 1929, and October, 1939 (when production was 2 per cent greater), hourly earnings increased about 22 per cent, nominal pay rolls declined about 10 per cent, while real pay rolls increased by about 8.5 per cent. Hours per week declined about 21 per cent and the number of wage earners on manufacturing pay rolls declined about 4 per cent.

We see, then, notwithstanding very substantial increases in hourly earnings, that the average nominal pay rolls in 87 manufacturing industries as well as bituminous coal are still below while real pay rolls are from 6 to 8 per cent higher than their respective levels in 1929. Moreover, despite substantial reductions in weekly hours, the number of wage earners at work in these industries is slightly less than the number employed in 1929. Do these represent the accomplishments of almost seven years of feverish activity on the part of organized labor and the federal government to increase purchasing power by raising the price of labor and to increase employment by shortening the hours of work? This limited analysis does not give a completely satisfying appraisal of union wage and hour policies but it does suggest that overemphasis on shorter hours and higher wage rates may not be the way to raise the standards of living of wage earners in American industries.

Those responsible for wage and hour levels may well give serious thought to two sets of data recently published in the *Economist* (London): Between 1929 and 1938 the hourly earnings of American workers (National Industrial Conference Board data) increased 23 per cent but pay rolls fell by 18.5 per cent (presumably the figures for manufacturing industries). During the same period wage rates in Great Britain rose less than a third of the American increase, but British pay rolls increased by 20 per cent and that in the country with the more "mature" economy. While a cause and effect relationship has not been established with respect to the developments shown by these two sets of figures, the data are sufficiently disturbing to warrant a careful scrutiny of recent wage and hour policies.

ROUND TABLE ON BANKING REFORM THROUGH SUPERVISORY STANDARDS

LEONARD L. WATKINS, *Chairman*

In this round table two papers were presented: Homer Jones, "A General Appraisal of Present Rules and Procedures, 1929-39"; Roland I. Robinson, "Appropriate Objectives and Functions of Supervisory Standards." In the formal discussion of the papers, Cyril Upham emphasized loan standards, Robert G. Rodkey commented on investment regulations, Laurence R. Lunden emphasized the state banking viewpoint, and Lawrence H. Seltzer commented on investments with respect to United States bonds. Others participated from the floor. The following summaries were prepared by the participants:

HOMER JONES: There are no codified uniform statements of the rules and procedures of bank supervision. Their appraisal depends upon learning something of these rules from their very limited legal basis, from the traditions of the supervisory agencies, and from observation of supervisory operations over a period of time.

The rules of most interest for our present purposes are:

1. The requirement for recapitalization, reorganization, or closing of any bank whose assets are found to have a value less than the amount of the liabilities (one definition of insolvency), or less than the amount of the liabilities plus the par capital (capital impairment). The outline of this rule has been in the National Banking Act since 1873.
2. The requirement for banks to acquire and hold relatively riskless assets.
3. Liquidity requirements (other than reserve requirements).
4. The requirement for a "reasonable" capital ratio.
5. The control over the number of operating banks.

Whatever may be the virtue of these various rules, it was desirable that during the 1930-33 period their application be held in abeyance. As the industrial depression developed, both rural and urban banks were victims, not primarily of their own mistakes, but rather of the general deterioration in economic activity. Banks as a group previously were in a hazardous condition only in the sense that the banks of any fractional reserve system must inevitably be vulnerable. Once caught in the spiral of deflation individual banks and bankers could do nothing either to limit the deflation or to save themselves. Anything which they did do to improve their position only intensified the deflation and ruined other banks. During such a period no bank should be permitted to close except when absolutely necessary to prevent gross self-dealing by the bank management. During depression periods, demand deposit banks should be supplied without limit with whatever cash is needed to meet the demands of their depositors. As a general rule, any supervisory pressure during depression for increase of bank capital, disposal of risky assets, or increase of the proportion of liquid or shiftable assets is undesirable.

The supervisors did not formally set aside these rules during the 1930-33 period and indeed enforced them to a considerable degree, thereby contributing

substantially to the intensity of the depression and to the banking collapse. Although they never renounced the major rules, the supervisors did relax some of the subsidiary procedures. Most notably, market price was largely abandoned as the criterion for bond valuation beginning in 1931. In the absence of recognizing the desirability of abandoning the procedures for which valuations are made, this was a desirable step. Government responsibility for the closing of banks in the 1930-33 period stems from two factors: failure to supply adequate cash to the banks and continued application of the traditional rules of supervision. The relative responsibility of these two factors cannot be assessed.

After the banking holiday, recovery was impeded by forcing some of the banks to remain closed, by reorganization, by recapitalization, and by readoption of market price as a criterion of value. Through purchases of bank stock by the Reconstruction Finance Corporation the government limited risk to one of its instrumentalities, the Federal Deposit Insurance Corporation, by increasing risk to another instrumentality, the Reconstruction Finance Corporation. The logic which supports minimum requirements for private bank capital does not support government subscription to the capital of banks.

Two aspects of bank supervision have been of chief interest since the reorganization period after the holiday. Allegations have been made that the influence of bank supervisors has helped to retard the extension of bank credit and consequently the recovery process. The allegations have no doubt been correct, but the degree of importance of this factor is difficult to measure. These criticisms of bank supervision have resulted in agreements by supervisory officials not to inhibit banks from making loans simply because the date of repayment is indeterminate or distant. The controversy was also probably responsible for the regulation permitting banks to invest in nonmarketable securities with the provision that they must be on an amortization basis.

Similar pressures led to provisions for government loans to business by the Federal reserve banks and the Reconstruction Finance Corporation. There apparently has been a general presumption that these direct loans to business could be of a different type or of a lower quality than the supervisors would permit to be made by the commercial banks. If this is the case the validity of such government policy is subject to question. With deposit insurance operating in the manner which has characterized it during the past six years and which will probably characterize it in the future,[1] the chief purpose of government supervision and examination of banks seems to be to prevent undue risk from falling upon the government and its agencies. But if this is true, why should supervisors prevent banks from making loans of a high degree of risk merely because a residuum of that risk would fall upon the government, while other federal agencies stand ready to make directly loans involving such a high degree of risk? In the absence of any conclusive evidence to the contrary there is a presumption that the minimum government standards for bank loans and the minimum standards for direct government loans should be identical.

[1] For a brief argument that the depositors in insured banks "have what is, in effect, 100 per cent insurance at the present time," see *Economic Journal,* Vol. 48, December, 1938, p. 700. See also the 1938 *Annual Report of the Federal Deposit Insurance Corporation,* pp. 11, 12.

In 1938 the supervisors agreed to value high-grade bonds held by banks at cost less premium amortization rather than at market price. Whether this rule will endure is problematical, since it is endangered by the propensity of supervisors to use market value as a special case for banks they consider weak and to adopt market price for all bonds in all banks when the market has surged upward.

Bank supervision can desirably play but a minor role in the field of social control of business. Bank examination and supervision are necessitated by the nature of the banking structure of the country, but they do not appear to be either useful or necessary for monetary or investment control unless incidental to some broader radical program of a type not currently the accepted program of the country. The lending powers acquired by the Federal reserve system since the 1930-33 period should enable that organization to operate in any future crisis along lines here indicated. The bank supervisory agencies in the future should desist from certain practices in times of depression, endeavoring rather to require banks to confine their loans and investments in times of prosperity to those involving no more than a reasonable degree of risk, and to increase bank capital sufficiently during such periods to withstand any probable losses.

ROLAND I. ROBINSON: Bank examiners apparently can influence the quality of bank loans and investments and the practices in acquiring, handling, and collecting such assets. They apparently can also influence the extent to which banks keep liquid. In other words, examiners' influence is not confined to the quality and character of bank earning assets—it also extends to the total quantity of credit outstanding. Since most instruments of credit policy work through the quantity of credit outstanding, supervision is in some measure related to credit policy.

According to some views supervision may accomplish most of the objectives of credit policy. The traditional commercial loan theory is that bank assets should consist of loans based on productive or distributive transactions. According to this theory commercial loans have an inherently short-term and self-liquidating character which makes them an appropriate backing for demand deposits. In addition, the volume of loans created for commercial purposes cannot create a body of deposit credit in excess of the requirements of production and distribution. In other words, these loans are not only self-liquidating, they are self-limiting. The supervisory limitation of bank assets to self-liquidating loans, therefore, would accomplish most of the objectives of credit policy. The only exception is that credit policy, according to this theory, should not let reserve influences such as gold movements hamper proper "commercial" loan extension. This theory, however, is based on incomplete logic and in practice is faulty. While plausible in so far as the individual loan or the individual bank is concerned, it fails to recognize that liquidation of any substantial part of bank loans would be almost impossible and if banks generally attempted to liquidate their assets disastrous results would follow. Furthermore, loans that are expected to be self-liquidating are not always without risk. The commercial character of a loan does not eliminate risk. It reduces somewhat the chances of miscalculation because of the relative shortness of the time between the granting of the loan and its maturity date, and because some productive operation is supposed to be set

in motion by the loan, which, if prices and markets remain relatively stable, will result in the accumulation of the funds needed to repay it.

In addition, the self-limiting feature of these loans, while having a very attractive automatic quality, offers no security that both money supply and liquidity requirements will be met satisfactorily but not excessively. Loans based on productive or distributive transactions are self-limiting for given price levels. If for any reason, however, the prices of commodities which are produced and distributed to a large extent by bank credit assume a new alignment in the price structure, the amount of bank credit which may be generated may bear a new relation to money and liquidity requirements. By the same token this self-limiting feature is no guarantee that bank credit can restrict some particular price movement since such a movement, once started, can feed upon the credit it itself generates.

Rejection of the commercial loan theory, however, does not deny that supervision may have an important bearing on the way in which credit instruments work. Supervisory and credit policy certainly may obstruct the fulfillment of each others' aims. Examiners can urge an increase of liquidity on banks generally but only some of them can achieve it. Individual banks cannot directly increase bank reserves except as the reserve authorities are willing to permit them to do so. On the other hand, an easy money policy of the credit agencies may have negligible effect if the supervisory agencies successfully encourage banks to hold the additional reserves they receive uninvested. The two kinds of policies framed in conflict may neutralize one another.

Supervisory and credit policy are related in still other ways. The examination, bank by bank, of credit standards and practices may fail to disclose the existence of an unstable debt structure. For example, individual banks may follow unimpeachable practices and standards in making real estate loans, allowing only a conservative loan in relation to appraised value and following all of the recommended practices in connection with such loans. This, however, will not necessarily guard against the aggregation of a volume of real estate debt which at a later time may overburden and disorder the price market for real estate.

Some kinds of credit extensions involve very little hazard of loss for individual banks but in the aggregate these credit extensions may be unwise, even dangerous. Security loans sometimes fall within this category. Although these loans have involved no unusual credit risks for the banks that have made them, they appear to have stimulated security speculation in some periods. Although the objection to security speculation on credit may not be validly advanced on the grounds that it "absorbs" bank credit (this contention has been debated very fully in recent economic literature and in general denied), there are other objections which may be raised against security speculation. One of the most important is that it almost always runs to excesses—goes further than real economic changes justify—and that its excesses produce excessively optimistic or pessimistic waves of business sentiment. Business policy may be moved too much by the levels of stock prices. Regulation, such as that of the Board of Governors over security loans, offers some hope of bringing the movements of stock prices stimulated by credit within reasonable limits.

Commodity speculation also seems to have some undesirable characteristics

which might be reduced by regulation of the credit supply upon which the speculation depends.

Banking supervision has the precise and local character which would make it appropriate for the dampening of speculative developments if they fed on bank credit. It could be aimed at the precise point in the economy in which there is such a development. Credit policy usually operates through instruments so broad that they affect all segments of the business community without distinction. Speculation, which can develop very locally in one place or in one market might be rather unaffected by the broad application of the traditional instruments of credit policy while the rest of the economy was suffering a quite senseless restriction.

It would seem, however, that although supervision might be used appropriately in a very select and specific way to accomplish some of the objectives ordinarily identified with credit policy, it does not displace such policy. When an inflationary development in the whole economy becomes evident, when prices generally are rising and inventories increasing, supervision would be a slow and uncertain instrument of restriction compared to the instruments of credit policy such as reducing available bank reserves or increasing their cost. Supervision does not appear to be appropriate for such circumstances. When expansion needs to be encouraged, supervision might help but the whole process cannot proceed without additional reserves.

CYRIL B. UPHAM: I am in accord with Mr. Robinson when he says that "there is more than a doubt as to the ability of any credit or supervisory agency to formulate plans comprehending the whole economy"; and I am in accord with Mr. Jones when he says that "bank supervision can desirably play but a minor role in the field of social control of business."[2]

Mr. Robinson seems to have a higher degree of respect for solvency than Mr. Jones has. He states that it is a "matter of public concern," and again that there is "no dispute about the propriety of solvency and liquidity as objectives of supervisory policies." I infer that Mr. Jones thinks it is of little importance whether a bank is solvent or not. Each gives a sort of grudging endorsement to examination and supervision of banks. Mr. Jones says that they are "necessitated by the nature of the banking structure of the country," while Mr. Robinson says that "public regulation of banking . . . . is an accepted part of our system."

Mr. Robinson tells us that to establish a supervisory standard for the regulation of bank assets is simply to answer the question: "What is an appropriate bank asset?" He dismisses self-liquidity as an appropriate standard because, he says, "traditional commercial banking" can never be revived and because the general liquidation of bank loans would be a national calamity. I have two comments as to that. One is to the effect that because bank assets cannot consist wholly of loans based on productive or distributive transactions, it does not follow that those assets which are of that character should not be sound and self-liquidating. The other is that national calamity has also resulted from the failure of banks to adhere to the principle of self-liquidation as closely as they should.

[2] These and other quotations are from the main papers under discussion.

Supervisory standards are not something which the supervisors have spun out of pure theory of what they regard as good for banks, but are merely the common law codification of the standards which good banks have recognized and imposed upon themselves down through the years.

I wonder what poor banker convinced Mr. Robinson that "banking losses have not been so much the fault of management as of economic instability," and Mr. Jones that "banks are not primarily the victims of their own mistakes but of general deterioration in economic activity." Those are the perennial excuses of the banker who has been a failure at bank management. Good bankers know that there is such a thing as economic instability and prepare for it. They know, as Mr. Robinson seems also to recognize, that there is no automatic safety "except in a stable economy with adequate productiveness." Until we have achieved that stable economy, good bankers and good supervisors will continue to require safeguards against insolvency, against illiquidity, and against unsoundness. They will continue to keep in mind what Mr. Robinson and Mr. Jones seem to esteem of no account—that there are depositors who sometimes demand their money. High standards of banking do not create crisis.

Do not blame bank examiners for the condition of the banks or the absence of present-day protections for depositors. Bank examiners do not buy the bonds and do not make the loans. They are only in the banks a few days each year. There is no excuse for bank examiners or supervisors taking over the management of the banks. But they can, and I hope and believe do, help bankers to run better institutions than would otherwise be the case.

I am alarmed to hear Mr. Jones say that the chief purpose of government supervision, now that we have the FDIC, is to prevent undue risk from falling on the government and its agencies, and again that the primary function of government supervision is to keep within reasonable bounds the risk borne by the federal government. If the existence of the FDIC is to be an excuse and an encouragement for unsound and illiquid bank assets and less careful bank management, as many of the state insurance systems were, it will be a sorry day for all of us. There are some large banks with a very small percentage of deposits insured. Should they not be supervised? And where does Mr. Jones' theory leave us so far as bank examination and supervision by state officials is concerned? Can the state departments be justified at all if protection of the federal government is their only function? No, the strength of the FDIC has been its record of insistence upon the maintenance of sound banking principles. The Chairman, Mr. Crowley, has been outstanding in his support of high standards of bank management. Sound banks are not only a protection to depositors but are a source of profit to stockholders. And they contribute to general economic welfare.

Banks should be solvent and have adequate capital protection for depositors. Their assets should be sound and reasonably liquid. Liquidity may be provided by the central banking system or a government agency, but the wise banker will provide it for himself. And sound, reasonably liquid banks, with good loans and high-grade securities, capable of withstanding depression and loss, contribute their full share to the general welfare and the promotion of economic stability.

ROBERT G. RODKEY: Pessimism as to the prospects for banking reform through supervisory standards has been expressed here today. I share that pessimism with respect to national credit control. But reform of a different kind—increased soundness of individual banks—might be achieved through a change of emphasis on the part of supervisory agencies.

The traditional emphasis in bank examinations has been on technical routine matters with only incidental attention to general policies. Sound general policies are usually accompanied by sound assets, and general policies can be sound only if the internal routine arrangements of the bank are such that there is readily and automatically available information essential for the determination of sound policies and the presence of only sound assets.

For instance, it is common knowledge among metropolitan bankers that the typical country bank fails to maintain adequate credit files. Hard-boiled insistence that proper credit files be regularly maintained is the best cure for unsound loans.

Banks have failed to keep pace in their internal arrangement with the changed character of their business. They are still set up to make loans, not to buy bonds. Nobody knows whether bonds will continue to comprise as large a portion of earning assets as they do today, but there seems good reason for believing that the present situation is not merely temporary. Yet in large numbers of small banks bond files are entirely lacking. This means that far too many banks buy corporate and municipal issues without careful analysis of their intrinsic merits. If the supervisory authorities were to insist upon the building up of adequate bond files hundreds of small banks would find it necessary to add to their personnel competent bond analysts and their bond lists might be expected to improve materially over a period of years.

The utilization of bond profits is one matter of general policy upon which supervisory authorities have agreed upon a standard ruling, which reads as follows: "Until losses have been written off and adequate reserves established the use of profits from the sale of securities for any other purpose will not be approved."

Passing over difficulties inherent in defining the term adequate this ruling does not prevent the transfer of such profits to the undivided profits account. But once in this account they become mingled with operating profits and in later years cannot be distinguished therefrom. This leaves open the possibility of payment of dividends out of bond profits of preceding years.

Neither does this ruling prevent the transfer of such profits to a reserve for the retirement of preferred stock, and the eventual retirement of preferred stock out of bond profits of the past. Many banks whose capital-deposit ratios are not unsatisfactory have done this, and are thus less able to withstand heavy bond losses in the future. It is suggested, therefore, that the following rule be substituted: All profits from the sale of securities shall be transferred to a bond reserve account, which reserve shall be used exclusively as an account against which realized losses on securities may be charged.

Nobody can know whether in the future we shall have a drastic decline in the general level of bond prices. The setting aside and retention in available form

of all realized bond profits is only one avenue of defense, but it is an avenue which supervisors should insist be followed.

LAURENCE R. LUNDEN: Nullification of credit policy may arise from the differences in the objectives sought by those who formulate credit policies and those who supervise and examine banks. The present system of conflicting jurisdictions actually encourages this. As an example, we may assume that authorities in Washington may decide on an easy money policy designed to encourage the extension of credit. This may be the spearhead of an attack on depression influences. State bank supervisors, however, are, in the nature of the case, less concerned with the broader aspects of credit policy than they are with keeping banks under their supervision in a sound and liquid position. The desire of state bank supervisors to do this is understandable, and their failure to go along with an expansionist program may not necessarily justify the criticism that their individual policies are ill-conceived. Thus, it may be argued that conflicting jurisdictions with dissimilar purposes frequently operate to nullify a credit policy.

One means of eliminating the abortive influence of supervision on credit policy is to bring about a greater degree of consonance between credit policy and other major national policies. It is conceivable that a state bank supervisor may be forced to take steps which may prove deflationary against his own will but which are nevertheless made necessary by national policies that are not compatible with the prevailing credit policy. For example, the prevailing credit policy is to induce private investment through the maintenance of easy money conditions. It must be admitted that from strictly a monetary point of view all of the ingredients for successfully promoting private investment are present. Bankers, representative of one important section of the supply of funds, are so frightened by the implications of certain federal policies, particularly the ones with respect to wages and taxes, that they refrain from making investments. If the administration's policy with respect to wages and taxes were designed to implement credit policy, expansion would undoubtedly be easier to achieve.

A typical state bank supervisor is confronted with the dilemma of subscribing wholeheartedly to credit policies formulated in Washington and governing his supervisory policies accordingly or of relegating credit policy to a position secondary to considerations of soundness and liquidity. The dilemma can be resolved into a single course of action only if credit policy is made consonant with other major national policies or vice versa. A further problem presents itself even when this is done. For a credit policy to be completely effective, its scope must be so great that it embraces a broad program of national economic planning. Whether this constitutes a major objection to attempting a fully implemented credit policy depends upon the political and economic philosophy of the individual.

Still another requisite for making a credit policy fully effective is to eliminate conflicting supervisory jurisdictions. This would involve some radical changes in the present banking structure. Whether proponents of making credit policy effective and implementing such policy through supervision are prepared to go

.e lengths to achieve their goal remains to be seen, but it is hoped that the .ort will not be made without considering the costs which such an experiment might ultimately entail.

It is conceded that the mere failure to embrace such radical changes as suggested above might not necessarily condemn efforts toward achieving more effective credit control. It can be argued that effective credit control might even be achieved by permitting the dual banking system to remain. However, effective control would hardly be possible unless membership in the Federal reserve system were made mandatory or that supervision by the Federal Deposit Insurance Corporation were made the means of implementing credit policy. The second course seems to be somewhat inconsistent, since the aims of the FDIC can conceivably be at variance with the objectives of credit control. Some changes are, therefore, necessary even if the dual system of banking is permitted to continue.

Implicit in Mr. Robinson's paper is the belief that one important function of credit policy is to determine into what channels investment funds might flow without having adverse effects on general welfare. It is obvious that the formulation of credit policy and the determination of the direction of the flow of investment funds should emanate from the same source. At the present time, however, these two functions seem to be dissociated, at least in one important instance. The economic implications of this should be examined. Reference is made to the power which has been given to private rating agencies of influencing the direction of the flow of that part of investment funds controlled by commercial banks.

All supervisory agencies subscribe to a uniform system of investment appraisal. The determining factor in so far as the eligibility of a specific issue for bank investment is concerned is the alphabetical or numerical label assigned to it by the rating agencies. Thus, if private rating agencies agree that the investment outlook for a certain class of securities is unfavorable, they can, by lowering ratings below the minimum level now permitted, effect a virtual economic boycott on such a field of investments. Within a comparatively short period of time rating agencies have reduced ratings on railroad bonds to a point where it is difficult to find a railroad obligation that is eligible for bank investment. This has had the practical effect of removing banks as a possible source of investment for one of the largest industries in the country. On the other hand, rating agencies are apparently favorably disposed toward bonds of public utility companies with the result that one has to search rather diligently to make up a list of as many as a dozen issues of operating companies that are ineligible for bank investment. Inevitably, funds will flow into the public utility field with greater facility than would be the case without this institutional factor.

For purposes of this discussion, it is not important whether rating agencies have been, or will be, correct in their appraisal of the credit trends of the railroad or public utility fields. Neither is it important to discuss the alleged merits or faults of the concept of ratings. The important thing which is emphasized here is that rating agencies, without solicitation on their part, have been endowed with power to determine into which channels investment funds will flow. Since this is a function to be coupled with the formulation of credit policy, I believe that the subject of eligibility requirements relating to investments should be re-examined.

LAWRENCE H. SELTZER: It is urged by some that the Treasury Department could aid the bank regulatory authorities and likewise minimize the risks of banks by confining Treasury offerings of securities most largely to short-term maturities. Then, in the event of a rise in interest rates, banks would suffer far less depreciation in the market value of their portfolios of governments than if they held large amounts of long-term issues.

There are many objections to this view. The Secretary of the Treasury must have an adequate regard for the fiscal convenience of the government, which would scarcely be furthered by an enormous concentration of short-term maturities. He must have a due regard for the desires of other than banking investors. These, in the aggregate, absorb more governments than do the banks; and most of them would not be content with the low yields available on short-term issues. The latter is true also of many banks. As a matter of fact, on June 30, 1939, five eighths of the total of governments held by the insured commercial banks consisted of maturities longer than five years. At last week's average rate, a bank could obtain only $7 gross revenue a year from $100,000 invested in 91-day Treasury bills. It could obtain no positive interest yield whatever from any Treasury note maturing within twenty-seven months; and even a four and a half year Treasury note would yield it little more than ½ of 1 per cent interest a year.

The relative immunity of different maturities to price depreciation in the event of higher interest rates should not be abstracted from the actual interest-rate structure. Judged by the past, a rise in the general level of interest rates would bring about a far greater rise in short-term rates than in longer-term rates. When to this consideration is added the substantially greater income available on longer-term securities, the question of relative safety becomes one of detailed calculation. At the end of December, for example, one could obtain about the same income from an investment in the Treasury 2 ¾'s of 1960-65 as from an investment four times as great in the Treasury notes maturing in September, 1944. Under easily conceivable conditions, the latter investment would show a greater price depreciation.

DONALD S. THOMPSON: A bank examination is concerned primarily with the verification and appraisal of assets and the analysis of the capital accounts. The accounts of the bank are not audited in the accepted sense of that term unless fraud or dishonesty is suspected.

The discussion this afternoon indicates that when we deal with the value of bank loans and securities we are dealing with something of which we know little. When a banker makes a loan or buys a security he enters the value thereof on his books. It may represent his best judgment but even so it is only judgment, which is a polite word for guess. The examiner or appraisor comes along and puts a value on the assets. His value is also a guess. Neither the examiner nor the banker (or anyone else for that matter) really knows what the value of the asset is until the asset is extinguished. Once we recognize that there is nothing sacrosanct about guesses we can expect to make some progress in the solution of our problem, which is to decide which of the various guesses we wish to believe. It would appear to me to be desirable to adopt a system of guessing which while fair and objective and reasonably simple of application would at the same time subject us

to a minimum of embarrassment resulting from economic instability. Mr. Jones has posed a serious question the answer to which must be found if our banking system is to continue to function satisfactorily.

CLARK WARBURTON: I want to give my emphatic endorsement to Mr. Upham's comments on Mr. Jones' attitude regarding bank examiners' standards of liquidity and solvency. Nevertheless, Mr. Jones was calling attention to a major defect in the operation of our monetary and credit institutions during the period 1930 to 1932; namely, the rapid contraction in the nation's circulating media and the reflex effect of this contraction upon values and economic conditions. That contraction, in my opinion, was largely responsible for the intensification of the business depression after 1931, although the basic causes of the depression lie outside of monetary and banking phenomena.

On the basis of these two comments, I would like to pose the question for future discussion: What changes need to be made in the monetary and banking structure, or in the functioning of the monetary and banking system, so that in a period of business depression banks and bank examiners can fulfill their duty with respect to the maintenance of liquidity and solvency, while at the same time avoiding contraction of the circulating media?

HOMER SPERO: Mr. Jones and Mr. Robinson both hold the monetary policy of the government at fault in the early 1930's in not providing the weaker banks with sufficient cash to stay open. However, that should not be the function of the government. That would merely involve a governmental burden while failing to deal with one of the major fundamental problems—the unsound economic situations in trade and industry. These latter must be dealt with adequately and a sound business basis established before a strong banking structure can be created and maintained.

ROUND TABLE ON THE INCIDENCE OF TAXATION

HARRY GUNNISON BROWN, *Chairman*

The following summary of the proceedings of this round table includes papers by James K. Hall, on "The Incidence of Death Duties," and by Henry C. Simons, on "Incidence Theory and Fiscal Policy"; and discussion by Harold M. Groves, M. Slade Kendrick, and Tipton R. Snavely. Except for the summary of Professor Hall's paper, the abstracts were submitted by the participants.

JAMES K. HALL:[1] Discussions of the incidence of death duties in economic literature have been, on the whole, scattered and fragmentary. The *Report* of the Committee on National Debt and Taxation (1927), the *Economics of Taxation* (1924), by Harry Gunnison Brown, and *First Principles of Public Finance* (1936 translation), by de Viti de Marco, are among the noteworthy exceptions. American writers in public finance generally have emphasized the descriptive aspects of particular death duties.

No less than four different conclusions of death duty incidence may be distinguished. These vary from the view that death duties are without burden, provided that substantially the whole of the estate is taken by such taxation, to conclusions that the incidence of death taxes is on the predecessor, the successor, or jointly, and in indeterminate proportions upon both the predecessor and the successor.

Jeremy Bentham, in his advocacy of burdenless death duties, contended that, for burden to be involved, there must be expectation of benefit. In the absence of expectation there can be no disappointment and, therefore, no hardship. He suggests that the measure of burden is to be found in disappointed expectation. Should the state take all, or the major part, of estates through death taxation, no one would expect to receive anything of consequence; hence there would be no disappointment and no burden.

In general, those who support the conclusion that death duties establish their incidence on the predecessor regard this taxation as a capitalized income tax, or an occasional compound property tax. Successors, it is said, generally are indifferent to the amount of death taxes. Further, the whole of the levy will be paid by the transfer of an appropriate amount of estate value. Also, the successor's power to consume is not burdened except in a negative sense, because whatever he may inherit constitutes an addition to his consumption power. Among the leading exponents of this view of incidence are A. C. Pigou, de Viti de Marco, and, in regard to estate taxes, the Committee on National Debt and Taxation.

The view of incidence which apparently has received quite general endorsement by American economists is that the incidence of death duties is upon the successor. It is argued in support of this conclusion that the predecessor is dead before the taxes are imposed and dead men cannot pay taxes (Hugh Dalton), that predecessors generally make no advance financial provision for the duties (Sir Felix Schuster), and that successors would be richer by the exact amount of such taxation if it were not imposed (Henry Sidgwick). Professor Harry

[1] To be published in full in the March issue of the *American Economic Review*.

Gunnison Brown, while concluding, apparently, that the burden is upon the successors, visualizes possible shifting of these taxes. He reasons that if personal motives to save are affected adversely by death duties the total accumulation of wealth will be decreased and, in consequence, interest rates in the long run will rise. In this event the incidence of death taxes will be upon laborers or landowners, or both.

Lastly, death duty incidence is viewed in terms of a divided burden between predecessor and the successor, with the proportions incapable of determination. This theory of mutuality of incidence rests upon the assumption of the jointness and solidarity of the pecuniary interests of the predecessor and successor. An analogy is found in the income tax, the burden of which, it is contended, affects the taxpayer's son as well as the taxpayer himself, and perhaps as severely.

The view of incidence which it is believed may be most strongly supported is that the burden of death duties, including taxes directed to the estate as a whole as well as the distributive shares, is upon the predecessors. Incidence from this point of view is interpreted with reference to the immediate burden of such taxation, and is distinguished from the subsequent economic and other effects which result therefrom. Admittedly in certain cases the motives to save or accumulate may be weakened in consequence of the psychological reactions of predecessors to death taxation with the supply of capital relatively diminished. This seems, however, more appropriately to be regarded as an effect of incidence rather than a part of the process of incidence establishment at a point apart from the predecessor. An analogy may be drawn between personal net income taxes and death duties in terms of the absence of subsequent price transactions, and the indirect and indecisive manner in which personal industry or activity may be affected in the former case and personal saving in the latter. To successors generally it appears that sharing in estates is a net gain with their standards of living thereby increased over and above their individual exertions. The successor's power to consume will not be burdened except in a negative sense. On the other hand, the predecessor has exercised during life less than his full power of consumption, even though voluntarily. The burden of death duties, as well as such other costs attaching to estate creation, appears to rest fully and finally upon the predecessor.

HENRY C. SIMONS: Most of you are doubtless sensible of the awful state of economic theory as it appears in the literature of our special field, in the public finance textbooks, and presumably in college courses generally. One is tempted to say that there are more analytical "howlers" in chapters on incidence than anywhere else in the literature of economics. The accessible literature of incidence, at all events, is largely the product, first, of writers not well-qualified for economic analysis and, second, of pure theorists who, with no sense of significant practical issues, have constructed analytical curiosa in the form of incidence problems.

What we might expect as a minimum, given the present state of general economic theory, is skillful and penetrating discussion of highly differential taxes, in their effects upon relative prices and, assuming full employment, on the allocation of resources. The influence of such taxes under pure competition is an

elementary problem in partial equilibrium analysis; the analysis yields results which are simple enough for easy application in practical questions of policy.

I believe that what can usefully be said about the incidence of taxes under very imperfect competition can best be said without recourse to much formal, geometric, or algebraic analysis. The important question here, as I see it, is one of the effect of taxes on the price strategy of precarious collusion, formal or tacit and informal, i.e., a question of the politics of price strategy, not of marginal revenues and expenses in any simple meaning of those terms.

A few suggestions for raising the level of incidence discussion are as follows:

1. Discussions of incidence under competitive conditions must be purged completely of propositions appropriate only to the case of monopoly or highly monopolistic competition.

2. Almost everything commonly said about the incidence of taxes under conditions of decreasing cost must be discarded; and propagation of the notion that industries are commonly operated under such conditions must be stopped.

3. The sophistical Cambridge speculations on the welfare advantages of taxing industries of markedly increasing cost should not be retailed to elementary students or treated as sources of significant insights anywhere.

4. The lag of incidence theory behind general theory should be reduced from more than a century to less than fifty years. General equilibrium analysis and alternative-cost conceptions should inform the treatment throughout.

5. That pathetic, appealing figure, the marginal producer, with all the misconception and confusion which accompany his appearance in analytical argument, must go.

6. The methods and propositions of partial equilibrium analysis, invaluable in their proper place, must not be carried over, as they commonly are, into areas of inquiry where they are grossly and patently inappropriate.

I am increasingly persuaded that useful instruction must give attention mainly, and not incidentally, to nondifferential levies or, better said, to those effects of actual taxes which are not allocational. Some reasons are:

1. Taxes like our sales taxes and pay roll taxes have acquired a major place in our revenue system and—perish the thought!—are likely to retain it.

2. There is little difference, as to important effects, between general excise levies and vast collections of particular excises.

3. The important commodity taxes, even when studied separately, are seen to have effects which have much in common with the effects of general excises. Our important particular excises have much in common economically with sales taxes and pay roll taxes. One urgent reason for stressing these similarities, incidentally, may be found in the curious practice, even among academic writers, of condemning the one kind of levy and commending or condoning the other.

4. Systematic discussion of nondifferential excises is invaluable as preliminary to the discussion of property tax incidence.

An increasingly popular solution of the methods problem is to study the joint effects of a new tax and particular new government expenditures equal to the new revenues. With other proper assumptions it yields meaningful conclusions. However, I wish to argue and protest against its use in general incidence discussion.

Our discussions of incidence problems should be focussed upon the significant relative effects of different revenue devices for obtaining the same revenues. So the proper procedure in studying the effects of a particular tax is that of assuming its imposition to be accompanied by a total-revenue-balancing reduction in some other specified levy. The most useful analyses are probably those which indicate how various taxes would work out relative to a flat proportional income tax as the common norm. It is for us to weigh new or questionable spending schemes against the worst taxes which must be imposed or retained to provide the necessary aggregate revenue.

No straightforward analysis is possible without definite monetary assumptions. Analysis of the effects of nondifferential excises, relative to the income tax norm, should start with the assumption of deliberate fiscal stabilization of some particular price index, preferably in most cases an index of wholesale prices. We must go on to study the implications of our monetary assumptions—to see, in each case, what kinds of monetary action would be necessary to maintain the assumed index stability. It will then be easy to indicate—much less systematically, of necessity—how the relative effects of taxes might be different in the actual world.

Tentatively I suggest that incidence discussion should now be designed mainly to reveal the relative effects of different taxes (1) on the degree of economic inequality in the long run, (2) on the legitimate vested interests of particular groups, and (3) on the volume of unemployment. Of these the third strikes me as the most important and, because it plunges us headlong into monetary problems, much the most difficult.

Harold M. Groves: Professor Hall's exhaustive exposition of the incidence of death taxes gives small attention to the definition of terms. It may be thought that we should not worry too much about mere matters of definition but I think that they are rather significant in this discussion because they are the basis of many important exclusions. The distinctions between incidence and effects, in the discussant's opinion, are nowhere so sharp and clear that a line can be drawn between the two and one can be properly treated apart from the other.

Does an inheritance tax reduce saving? If so, do interest rates respond by rising? If the answer is again affirmative, do profits tend to behave in a similar manner? Does this mean that rich men tend to accumulate faster and more during their lifetimes to compensate for the taxes they must pay at death?

These issues are too involved to attempt a solution here. I suspect that few students would resolve them all affirmatively and conclude that death taxes are perfectly diffused. But the point to be emphasized, in the discussant's opinion, is that these questions are vital in death tax incidence.

I accept much of Professor Simons' criticism of incidence theory but I wish to dissent from his view that public expenditures should be ruled out in treating incidence. It is said that what the government does with its revenue may have important economic effects but they are no concern of incidence and fiscal policy. On the other hand Professor Simons himself argues that expenditures should be conservative because the gains therefrom aré likely to be overbalanced by the unfortunate consequences of bad taxation. It is true that public finance students do not usually recommend earmarking of taxes for particular expenditures. On

the other hand, legislators must balance the marginal dollar of outgo against the marginal dollar of intake and they are entitled to help from economists at this point. Public finance specialists cannot shirk this responsibility by saying it belongs to some other field. Public expenditure is a time-honored division of public finance. To include it in the discussion of incidence does add complications. But any analysis of the economic effects of taxes will surely be incomplete and one-sided if it ignores what the government does with the revenue. Particularly if, as Professor Simons advises (and properly), we are to give more thought to monetary effects of fiscal policy, public expenditures should receive due attention.

I agree with Professor Simons that incidence theory should give more attention to universal (nondifferential) taxes but I am not very hopeful of the results. We can assert of course that in the long run, prices tend to cover costs but whether the costs will accommodate themselves to the prices or vice versa is not likely to be convincingly demonstrated. It may be that resort to marginal productivity at this point is hardly more realistic than the resort to the marginal producer, recommended for discard. I am equally sceptical of the view that to draw a proper solution we must assume an inelastic quantity of money.

M. Slade Kendrick: Professor Hall has given an excellent discussion of the various theories of the incidence of death duties to which possibly one addition should be made. In refutation of Bentham's argument, it might have been pointed out that the expectation of the heir should take into account the inheritance tax as well as the inherited share.

Professor Hall's own position, that the incidence of death duties is on the predecessor, follows from an admittedly limited view of incidence. The usefulness of this view may, however, be questioned as leading to a conclusion of no economic consequence. This is not to accept usefulness as a test of truthfulness but is rather to say that of two interpretations of a term each of which can be justified, the more useful is to be preferred. A broader meaning of incidence would give results of economic importance.

Professor Simons would have the tax specialist limit his attention to the revenue effects of taxation, arguing that this limitation but recognizes his special and proper function.

This seems an artificial method of bounding the duties of the tax specialist. In practice, as Professor Simons admits, revenue problems are not always distinctive from expenditure problems. Moreover, the significant problems of fiscal policy that Professor Simons would have illuminated with the effects of different taxes are not to be examined adequately without reference to governmental expenditures. For example, why should a tax specialist interested in the effects of taxation on economic inequality stop with revenue. If the government may modify economic inequality by taking from the rich, may it not accomplish this purpose more effectively by spending the revenue so obtained for the poor. If the problem of economic inequality is worth the attention of the tax specialist, surely he should have the use of all tools needed for its solution.

Tipton R. Snavely: Given the premises which he assumes, Professor Hall has made a strong case for the establishment of death duties on the predecessor.

Incidence is properly defined as the direct money burden of a tax, not its indirect economic effects. Hence, such factors as the psychological burden, the inability of the testator to make payment in person, moral and legal aspects, and the action of the predecessor in anticipation of the tax have no significance. Incidence, then, becomes a purely mechanistic process. A majority of economists have been unwilling to accept such an extreme conclusion. Is it not possible to find exceptions to the rule? Suppose that the beneficiaries of an estate have worked equally hard with the testator in its creation, have saved with equal effort, and have exercised similar restraint in consumption—all in the knowledge (though this is not important) that they would succeed to the property. Has the economic burden fallen exclusively on the predecessor? In this case, it is necessary not to confuse the economic burden with legal ownership.

Professor Simons is correct in his criticism of partial equilibrium analysis as applied to incidence. On the constructive side, he recommends the study of "significant relative effects of different revenue devices for obtaining the same revenues." We should look, as it were, at the opportunity cost involved. This method of analysis may yield highly fruitful results, but it is admittedly abstract, as is the suggestion that the analysis of incidence "should start with the assumption of deliberate fiscal stabilization of some particular price index. . . ." Is not this methodological approach quite as unreal as the partial equilibrium analysis of Marshall? We must know what will happen to the structure of "precarious collusion" in any likely set of circumstances—whether the price level is stable or unstable, whether the cycle is going up or down, and whether total-revenue-balancing reductions or additions are being made.

ECONOMIC PLANNING

GOVERNMENTAL ECONOMIC PLANNING

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Governmental economic planning is back seat driving by a man who doesn't know how to drive and who, except in wartime,[1] doesn't know where he wants to go. It is, moreover, back seat driving by a man who makes a very heavy charge for his services at the expense of the chauffeur's wages, and who increases these heavy charges month after month. As the chauffeur's wages prove inadequate to support the governmental back seat driver, a mortgage is placed on the car, and inroads are made on the gas and oil of the automobile. Damaged fenders are left untouched. The automobile begins to miss its periodic overhauling. Cylinders accumulate carbon and don't all work. The machine slows down, and the chauffeur grows jittery.

In my discussion this evening I shall maintain the following theses:

The great disorders in our economic life since 1929 are primarily due to governmental economic planning and, above all, to governmental interferences with the orderly functioning of markets, including first, the international markets for commodities and the money and capital markets; second, domestic prices and wage rates. To this should be added the vast increases in taxes and government deficits created by the rapidly growing government functions. I believe that we have in these an adequate explanation of our disorders.

I shall maintain that alternative theories, which seek to find the explanation in "structural changes" which have recently come in our economic life itself, are dealing with symptoms rather than with causes. I shall maintain that the theories calling for more governmental economic planning because of these alleged structural changes in our economic life itself, are, in effect, merely calling for more economic planning to offset the evils that past economic planning has already caused.

One of these alternative theories which has recently received attention is based on the great slowing down in the rate of growth of population beginning with 1930. The population of the United States increased by 16 millions between 1920 and 1930; but the rate of growth since then has been perhaps half of that. The theory is that this so-called "structural change" has greatly narrowed investment opportunities.[2] The estimate is

[1] See my "Value and Price Theory in Relation to Price-Fixing and War Finance," *American Economic Review*, Supplement, March, 1918. See also "Economic Aspects of the War—Contrasts and Resemblances 1914 and 1939," an address before the Investment Bankers Association, October 12, 1939, published in the yearbook of the Association.

[2] Alvin H. Hansen, "Progress and Declining Population," *American Economic Review*, March, 1939.

that the growth of population in the last half of the nineteenth century was "responsible" for perhaps 60 per cent of the "capital formation" in the United States. The meaning apparently is that approximately 60 per cent of the capital invested in the United States in that period was devoted to the kind of production that would supply the wants of an expanding rather than a stationary population. From this supposed decline in the opportunities for private investment, the conclusion is drawn that the government must spend greater or less amounts, depending on the state of business and the volume of the national income, for the purpose of making good the deficiencies of private investment.

I do not question that there has been a long-run trend toward a higher average age in the population and toward a slower percentage growth in the population due (a) to an increasing diffusion of knowledge of birth control, (b) to progress in medical knowledge which makes for a greater length of life, and (c) for the United States, to our postwar restrictions on immigration. But when the startling contrast is made between the 1920's and the 1930's with respect to this point, and when it is asserted that "in this shift must be sought a basic cause of not a few of the developments in our changing economy," I raise very definitely the question of what is cause and what is effect.

It seems to me clear as daylight that the sharp decline in the rate of population in the 1930's was first of all effect. The 1920's were prosperous years. Despite our restrictions, immigrants came in large numbers. Our boys could easily get jobs. Girls were willing to give up their jobs and get married. Young couples had confidence in the future and had children when they wanted them. The 1930's have been years of depression, uncertainty, and fear. Immigration of aliens for several years was exceeded by emigration of aliens. Marriages have been delayed. Many girls at work have held their jobs after marriage. They have been afraid to have children.

Taking the years 1922-28 as our base, or 100 per cent, we find the number of marriages in the leading cities of the United States dropping to 80 per cent in 1930, to 70 per cent in 1931, and to 63 per cent in the gloom of 1932. But we find it also mounting rapidly again in the following years to 88 per cent in 1937—only to drop sharply again to 75 per cent in the acute depression of 1938. The boys and girls still want to get married, and they still want babies. Give them a prosperous world again, give them a safe world again, and we shall moderate our views a good deal about this sudden great "structural change." It is not the cause of depression; it is the effect of depression.

But how significant would it be from the standpoint of investment opportunity if it were true we had here a permanent change? What difference would it make? Assume that for the future we are to have less young children and more older people and that the population is to grow more slowly.

What bearing has this on the question of investment opportunities—except as any violent shift in the economic situation creates for a time a problem of adaptation? That it would mean a change in the direction of demand is quite clear. A slowly growing population with more adults and fewer children would demand less playgrounds and more golf courses. It would demand less milk and more whisky.

Would it demand less automobiles? A young couple and three or four children will usually be a one-car family. A young couple with no children is more likely to be a two-car family, and the probabilities are high that they will turn in their used cars for new cars more frequently than will the one-car family with three or four children.

Will the population with fewer children and more adults and slow population growth make more or less demands for housing? The point is debatable. They won't need so rapid an increase in the number of separate dwellings, obviously. But if they are prosperous and have growing incomes, they will call for qualitative changes in housing and for progressively more space per person. The young couple which is putting its increased income into more babies will be much less concerned about the newest gadgets in dwelling facilities and equipment than will the young couple of one or two children or no children. Older people, moreover, stand the stress and strain of crowding far less than younger people and children whose nerves are quieter. They want more room, more quiet.

I see no reason at all to suppose that such a population, whose income is growing through technological progress,[3] capital accumulation, and increased efficiency, would not offer just as great an opportunity for investment as a population which is rapidly increasing and where there are many children. The rapidly growing population would want more things of the same kind. A more slowly growing population would want better things, qualitative improvements, and a greater variety of things. I have not even felt it necessary to examine the statistical basis of the proposition that 60 per cent of our capital formation in the last half of the nineteenth century was due to growth of population. Since population was growing rapidly in that period, obviously the direction of demand would be toward the kind of commodities needed in that kind of population; and capital, seeing its best opportunities for investment, would flow in that direction. If a more slowly growing population called for a greater amount of qualitative im-

[3] I have elsewhere dealt with the fallacy that technological progress is itself a cause of depression and general unemployment (*The Chase Economic Bulletin*, Vol. XVII, No. 2). I am glad to find myself in agreement with Professor Hansen upon this point. The theory that oversaving is the cause of our troubles I have discussed in *The Chase Economic Bulletin*, Vol. XVI, No. 2. To those who hold that corporate consolidations are the cause of our disorders, let me point out that there have been only two great periods of consolidation, 1899-1902, and 1924-29, both periods of cheap money and excited stock markets. Such movements are harmful, and should be prevented, but they are not inherent in the nature of industry itself. See *Big Business* (New York: Twentieth Century Fund, Inc., 1937), pp. 29-33.

provement and a greater variety in the goods it was consuming, capital investment, wisely directed, would adapt itself to that.

I find in this argument no justification whatever for governmental policy designed to supplement private investment by government spending. There is a relationship between retarded population growth and retarded investment, but it is not that of cause and effect. Rather, both are effects of a common cause; namely, fear. And one of the fears that retards private investment is the fear of government spending, the fear of growing government debt, the fear for the future of the money of the country.

The limitations of time clearly preclude an adequate systematic analysis of the general theory of governmental economic planning in this address. I shall content myself with some generalizations regarding the theory of the matter, giving footnote references,[4] which I shall not read here, to fuller discussions which qualify or elaborate certain crucial points. I do this the more readily because I want to save time for the recital of some recent history that has very definite bearing on some of the theoretical issues.

The problem of governmental economic planning is merely part of the general problem of economic co-ordination and control. The instrumentalities of social control and co-ordination are numerous. They include education, public opinion, and social expectation. They include religion, moral pressures, old customs, rapidly changing modes and fashions, and propaganda. They include, of course, government.

Government, essentially coercive in its functioning, resting, in last analysis, upon the organized physical force of the community, is a very clumsy instrumentality compared with any of the foregoing, though it can do some things which none of them can do, especially in dealing with human beings who cannot be controlled by means of the subtler instrumentalities. But law is meant for the exceptional case. A community whose members conformed to the usual pattern only when the sheriff appeared could not survive.

The market is the great instrumentality of economic co-ordination. When men begin to specialize, each producing more of a particular kind of product than he himself or his family can use, they must exchange their surpluses with one another. When specialization and the division of labor go very far, the money economy becomes necessary. The ploughmaker needs food, and the farmer needs ploughs. They never see one another. They are separated by hundreds of miles from one another. The money economy and the great market bring them together and co-ordinate their activities.

The growth of industry and the progress of technology have had, as one of their most distinguishing characteristics, a steady intensification of the division of labor. The substitution of the machine for the human hand is made possible as processes can be broken into small parts which involve monotonous repetitions of many simple operations rather than a varied,

[4] *The Chase Economic Bulletin,* Vol. XIII, Nos. 1, 2, 3, and 4; Vol. XVI, Nos. 1 and 2.

complex operation requiring judgment. The widening of the market and technological progress have grown together. The division of labor is limited by the extent of the market. When the market is very small, no person can dedicate himself entirely to one employment. And what applies to individuals applies to countries. No country can afford to devote itself to producing any commodity in excess of its own needs if a satisfactory foreign market for that commodity does not exist.

The corollary both for individuals and for countries is that if the market is suddenly narrowed or if the functioning of the market is perverted, distress and disorder of a grave sort ensue. Small wonder that every country in the world is suffering very grave economic disorder, when strangling trade barriers are erected among them.

Students of sociology have had much to say about so-called "cultural lags." When social change comes rapidly, the rate of change is uneven in different departments of social life, as law, morals, technology, economic activities, and education. Thus traditional educational methods have been criticized as tending to fit children for the life of earlier generations rather than for the life of today. Law, deeply rooted in the past and much governed by precedent, changes more slowly than economic conditions.

The principle of cultural lag is significant. Government has lagged far behind economic life since the eighteenth century, and has even, under the influence of the War and of postwar conditions, gone sadly retrograde from the standpoint of its proper relation to economic life.

The one great instrumentality of economic control and co-ordination which most clearly and definitely has kept pace with the growth of technology and productive power is the market itself and the system of market prices. And the causes of the greatest evils of the present national and world disorder are to be found in the interferences with the markets by governments under the influence of antiquated doctrines.

Governments have very important functions in connection with the markets. Markets can work properly only with sound money and it is the business of government to establish and maintain a sound monetary system. It is a proper function of government to maintain competition, to prevent corners, combines, monopolies, manipulative raids in the stock exchange or in the commodity exchanges—to prevent practices which keep the market prices from telling the truth, and which pervert the social co-ordination which the market supplies.

The regulation of competition, that is to say the establishment of a level of competition—even in the prize rings there are rules against hitting below the belt—is, first of all, a matter of trade practices, social expectation, morality. But government and law are often needed to supplement morality and trade practices in this matter.

I do not believe that, at best, even with government ideally organized for

controlling economic life, with an ideal set of officials who are masters of all the knowledge and understanding that economists possess, government could work out a conscious control of the economic life of a great people which would approach in efficiency the unconscious, automatic control which free markets and freely changing prices give. Government as at present organized in the United States has difficulty even in seeing what the problem of governmental economic planning is. An adequate economic plan must involve the various elements of economic life in their interrelations. A federal government with independent executive, judiciary, and legislature, with the legislature working through separate committees each concerned with a particular problem, with independent states and autonomous local governments, sees economic life piecemeal and not as an organized whole. Effective economic planning would have to be preceded by a complete centralization of our government. Democracy, local self-government, and individual rights protected by the courts would have to be done away with. The reconstitutions of government in Italy and Germany point the way—for those who wish to pursue it.

Government itself has reverted to policies of earlier times as a result of the Great War, which put emphasis upon the great, primary historic function of government; namely, organizing the group for war against foreign enemies. War and preparation for war constituted the major activities of government until fairly recent times. Internal liberty was strictly and sternly subordinated to wartime necessity. Economic policy was dominated by political and military consideration. Wartime propaganda is not a recent invention. It is found in the war dance of savage tribes.

Government, dangerously strengthened by war, has revived the atavistic economic policies tolerable only in a state of war, and applied them to a world economic life which had grown up under economic freedom in an atmosphere of peace. The growth of these atavistic policies has itself brought on and intensified the great depression. Trade restrictions, price fixing, and currency debasement were stock-in-trade of medieval and early modern government.

No conclusion stands out more clearly, I think, from a study of the nature of cultural lag, than does the conclusion that the market place is a far more modern and efficient instrumentality of economic co-ordination than government, and that the substitution of government control for control by freely moving market prices represents not progress but very dangerous retrogression.

From the point of view of the economist, it is the function of prices to tell the truth about what is going on in the fields of production and consumption, and to correct maladjustments and to bring about a re-equilibration of the productive activities when they get out of balance. The facts which lie behind prices may be bad facts, but we do not help the situation

by disguising them. Right prices, from this functional point of view, are prices that move goods. Right wages are wages that give full employment to labor. Right interest rates are those which equate the supply of capital to the demand for capital, keeping proper balance between saving and consumption, and so on. But it is the essentially medieval notion of just price, rather than functional price, which dominates both juristic tradition and present-day government policy when governments touch prices.

Economic progress from medievalism was marked by a steady breaking away from the notion of just price to the freeing of the markets so that flexible prices could prevail. There was a great deal of price fixing by act of Parliament or by rulings of the justices of the peace in England as late as the seventeenth century. The Industrial Revolution in the eighteenth century broke the fetters; and the great market, with free prices, developed along with modern industry on a vast scale. Government policy turned from regulation of prices toward the promotion of competition by means of laws against restraint of trade, and the regulation of prices was limited to those cases where competition was impossible or undesirable, primarily in the field of railroads and public utilities.

In this field there has grown up a great body of doctrine regarding just price: fair rate, fair return, and fair valuation on which return could be computed. But there is a wide divergence between the economic literature of the theory of value and prices and the literature concerned with public utility and railroad valuation and rate making, so much so that the students of the one field frequently find themselves puzzled as they read the literature of the other field. The explanation is that each is concerned with a different problem. The rate maker is concerned with fair or just price. The economist is concerned with functional price.

Thus, the economist would lower public utility and railroad rates in a period of crisis and business depression in order to cause as much traffic as possible to move and to facilitate the general readjustment needed for business revival. But, in the last two great crises, we have seen railroad freight rates raised by the Interstate Commerce Commission, at the beginning and in the course of the crises, once in 1920, just as the great crisis began, and again in 1932 and 1935.

Railroad and public utility rate regulation has come to be essentially a kind of warfare between the public utilities and the railroads on the one hand, seeking to keep up their rates and protect earnings for stockholders, and the regulating authorities on the other hand, trying to get rates down in the interests of consumers, with each afraid to yield anything for fear that it will be impossible to get back what has been yielded. The result is such a rigid rate structure that as prices and costs and volume of business move up or down it is very unresponsive to the needs of the general economic situation.

I am not here attempting the solution of the baffling problem of railroad and public utility regulation. I am, rather, urging that we avoid having to face this kind of problem in the field of our general economic life where the great market, if kept competitive, will itself automatically work things out.

It is reversion to medievalism when the AAA formulates its policy on the basis of "parity price"—a just price notion rather than a functional price notion. The same unsound theory prevails when high hourly or daily wage rates at which few men can be employed are substituted for functional wages—a policy to be condemned from the standpoint of the annual income of labor and the welfare of the laboring class. The NRA fiasco, resting on the just-price notion, ignoring functional price, represented dangerous reversion to medieval policies, as does our recent wage and hour legislation.

When I say that postwar governmental economic planning has had the main responsibility for the economic disorders of the period since 1929, I mean to begin with developments which preceded the widespread use of the term economic planning. In the United States, for example, the New Deal did not begin in 1933. The first great postwar action by the American government in interposing barriers to markets, in such a way as to undermine economic equilibrium, was in raising the tariffs in 1921-22. It was obviously necessary that we as a creditor nation should receive a great increase in imports of manufactured goods from our European debtors if we were to continue sending them our surpluses of cotton, wheat, tobacco, lard, and various other raw materials and at the same time permit them to make debt service payments here. But, instead, not as a matter of deliberate planning, but making use of one of the major instrumentalities of economic planning, we raised our tariffs and intensified a grave disequilibrium as between our agricultural and certain other raw materials on the one hand and our manufacturing and other activities on the other hand.

The next step was in the employment of our Federal reserve system in money market manipulation of a new kind and on a vast scale for the deliberate purpose of whipping up prosperity and, above all, for the deliberate purpose of getting out agricultural exports over our tariff walls. As a conscious and deliberate matter, this came first on a great scale in 1924, in the open-market purchases of that year, which created surplus reserves in the banks on a scale adequate to permit and to induce a very rapid expansion of member bank credit. This was repeated in 1927. It was economic planning.[5]

Between June 30 of 1922 and April of 1928, we had an expansion of

[5] See *The Chase Economic Bulletin*, Aug., 1924, Aug., 1925, Nov., 1926, Oct., 1927, June 4, 1928, June 25, 1928, Oct., 1928, Feb., 1929, May, 1929, Nov., 1929, and Sept., 1930, for an analysis and criticism of this process while it was under way.

commercial bank credit in the United States amounting to 13.5 billion dollars in deposits, and to 14.5 billions in loans and investments, due, in part, to inflowing gold, but due in large part to economic planning—the rediscount and open-market policies of the Federal reserve system.

To put these figures in perspective, I wish to contrast them with another set of figures. How big an increase is 13.5 billions in deposits? How big an increase is 14.5 billions in loans and investments? Well, during our participation in the last war, we had a great need for expansion in bank credit. We had to finance four great Liberty Loans. We had to finance the shifting of our industries from a peace to a wartime basis. We had to finance goods from various parts of the world to our Allies in Europe, including gigantic shipments from this side. We had to raise an army of 4,000,000 men and send half of them to Europe. There was need for bank credit expansion to accomplish these transitions and to perform these gigantic tasks. We watched this expansion with fear and trembling, and we held it down all we could. It amounted to 5.8 billion dollars in deposits and 7 billions in loans and investment. And it was enough.

This wartime bank expansion was less than half of the largely unneeded expansion of credit that we created between 1922 and 1928. There were no great war needs to call forth the expansion of credit between 1922 and 1928. Commerce wouldn't use it. It went, therefore, into extraordinary and all too frequently illiquid uses. There was a startling increase in real estate mortgage loans in the banks. There was a startling increase in installment finance paper. There was a rapid expansion in quantity, and finally a great deterioration in quality, of bank holdings of bonds. And there was a great increase in bank loans based on stock and bond collateral. Stock prices soared, and new issues doubled in a four year period. Commercial loans in the banks actually declined, because of the extraordinary ease with which business corporations could put out new securities and pay off their loans at the banks. I need not recount the disorders that grew out of the wild stock market that we built in that period of expanding bank credit, or the tragedies that came from the great expansion of bank holdings of real estate mortgages.

Part and parcel of this was the placement of foreign loans in the United States, beginning on a really colossal scale in 1924. In that year we took a billion dollars' worth of foreign loans, much the greater part of it coming in the second part of the year. The Federal reserve bank open-market policy began approximately at the same time as the Dawes Plan, the latter creating renewed confidence in foreign loans; the former providing the expansion of bank credit which made it easy to take the foreign loans. From the middle of 1924 to the stock market crash in late 1929 the foreign loans offset the high protective tariffs and we, a creditor nation, continued to send out a great excess of exports over imports at good prices. The dis-

equilibrium between agriculture and industry was concealed. Planning offset the evils of prior government interferences through that time. But in December of 1929 and in January of 1930 there came an ominous break in the prices of the basic raw materials and of many agricultural commodities, foreshadowing the evils that were to follow.

But governmental economic planning took other forms in the decade of the 1920's. For the first time in our history, the President of the United States and the Secretary of the Treasury assumed the responsibility for the personal conduct of the stock market, in the utterances of President Coolidge and Secretary Mellon. For the details of the record I would refer to Ralph Robey's brilliant and justly indignant paper,[6] "The Capeadores of Wall Street," in the *Atlantic Monthly* of September, 1928. But then came more governmental economic planning. In 1929 we created a Farm Board whose function was to dominate the wheat and other agricultural markets, and it began to work in the autumn of 1929. We got into this game late. Governmentally sponsored pools in Canada, in Hungary, and in Australia had been withholding wheat from the market, leading to a doubling of the visible supply between 1926 and 1929. As our Farm Board bought wheat in late 1929 and early 1930, these other countries sold, taking our export market from us, in effect transferring the visible supply from the outside world to the United States. Those who condemn the New Deal for its agricultural follies, and, above all, for loans to farmers which held back cotton that would otherwise have gone into export trade, should not credit the New Deal with originality on this point.

With the great crash in the stock market in 1929, there came further economic planning. The President called to Washington the leaders in business and railroads and others, to urge upon them the policy of not cutting prices, not cutting wages, increasing capital outlay, and the like—the personal conduct of business by the back seat driver, which is the essence of the New Deal and the essence of governmental economic planning. Municipalities and states were also called upon to increase their borrowings for public works. The poor old 'Frisco Railroad, impressed with its duty to keep purchasing power high, proceeded to declare its preferred dividend a full year in advance—with unsatisfactory consequences.

Then came a renewal of artificial cheap money in early 1930, with a further whipping up of the stock market with a further taking of foreign loans.

Then came another raising of the tariffs in 1930, which intensified to an unbearable degree the difficulties of our foreign debtors in making payments here, and which was followed by a great scramble all over the world to erect trade barriers. This created new problems of disequilibrium as pro-

[6] See also the fuller story in William Allen White's *A Puritan in Babylon* (Macmillan, 1938).

ducers for export in every part of the world found their markets cut off, and as new problems of internal adjustment were created for economic planners to solve.

The connection between economic planning and international trade barriers is the connection of a vicious spiral. Each seems to call forth the other; and the more of one you have, the more of the other you call forth. Ruining export markets creates internal disequilibrium and the problem of shifting those formerly producing for export into some other occupation. But as this is usually too difficult to accomplish in a hurry, the planners make use of borrowed public funds to take care of these producers on relief, or to put them to work in some makeshift activity. On the other hand, the planners do not wish to have their plans interfered with by foreign competition. It is significant that both NRA and AAA in this country had as part of their program increased trade barriers so that their higher costs might not be interfered with by foreign imports. "*Autarchie*" was an early slogan of the Nazi in Germany. Economic self-sufficiency is a deliberate part of the program of most economic planners. On the other hand, the loss of foreign trade makes a fertile field for propaganda for economic planning. The high protective tariff is the mother of the New Deal.

In this connection, it is very disheartening, indeed, to see important leaders of the political party which professes the greatest abhorrence of the New Deal, attacking the finely conceived and patiently pursued program of Secretary Hull for lower trade barriers throughout the world. We have here a manifestation of "cultural lag" in political tradition, blinding able men to economic realities.

The essence of governmental economic planning is the belief that government is responsible for the state of business, that it is the duty of government to have full employment at all times, that government must employ special measures with every flagging of industrial activity, that readjustments to correct mistaken economic policies must never be permitted. The call is for more, and more, and more of these activities as the evils growing out of past activities of the kind become more and more glaring. The juggler must put a new ball in the air every week, and his activities must grow increasingly frantic with each new ball. Never for one moment can we have laissez faire.

There are advocates of economic planning who would accept the general analysis given here of the contrast between government and markets, as regulators of business, as a matter of economic theory; who will recognize that if you had free prices, flexible economic life, and mobility of labor and capital so that price changes could bring about automatic readjustments, this would be better than governmental planning. But they say that this is a matter of abstract theory only—that we lack the smoothly functioning markets that the theory assumes, that we have an increasing body

of rigidities of one or another kind, so that to talk about the automatic control of industry by competitive markets is to talk about something that has passed away. What I want to consider realistically is whether it has passed away, and if so, how recently; and whether, to the extent that we have rigidities that make readjustment slow and difficult, they grow out of structural changes in economic life or grow out of governmental policies.

If it is the frictionless static state we must have, with absolute competition and perfect mobility of capital and labor, then of course we never have had it. But I shall maintain, on the other hand, that we had an adequate flexibility and an adequate degree of competition as recently as 1923 to serve for the purpose in hand. And I want to contrast the course of events between 1920 and 1923 when our government was still, in its essential attitude, old fashioned, with the course of events in more recent years.

We had a vast readjustment to make at the end of the postwar boom in 1920. From July of 1920 to August of 1921, the country passed from a violent boom through acute crisis into a very severe depression. Commodity prices broke from over 240 on the 1913 base to about 141. The Federal reserve index of production (base, average 1923-25) dropped from 89 in July of 1920 to 65 in July of 1921. Unemployment reached over 6 millions, as we then calculated it, and probably somewhat more, if we had calculated then as we do now. The business tide turned in August of 1921. The latter part of the year showed improvement. There was hesitance in early 1922, and then there began a strong upward move, which, by March of 1923, reached new high levels in volume of production, and in which there were labor shortages in many lines. The Federal reserve index of production reached 103 in that month, and 106 in the following month.

Now our government did virtually none of the things that economic planners call for in the course of this development. It was old fashioned. It conceived its main job to be to protect its own solvency, to cut public expenditures, and to relieve taxpayers of unnecessary burdens. Public expenditures went down year by year. Taxes were reduced rapidly, also, but not as fast as government expenditures. The following table shows expenditures, not including debt retirement, and the ordinary receipts of the United States government:

U. S. GOVERNMENT EXPENDITURES AND ORDINARY RECEIPTS
(in millions of dollars)

Fiscal Year	Expenditures	Receipts
1920	6,403	6,695
1921	5,116	5,625
1922	3,373	4,109
1923	3,295	4,007

The budget was overbalanced every year. The idea that we should have an unbalanced budget, in order to facilitate business revival, was not even considered. In the worst year of the crisis, public debt was reduced by 300 million and in the three-year period, it was reduced by 2 billion dolars.

U. S. GOVERNMENT DEBT

June 30	Millions of Dollars
1920	24,298
1921	23,976
1922	22,964
1923	22,350

This policy on the part of the government generated, of course, a great confidence in the credit of the government, and the strength of the gold dollar was taken for granted. The credit of the government and confidence in the currency are basic foundations for general business confidence. The relief to business through reduced taxes was extremely helpful.

Through the crisis no effort was made to flood the money market with an excess of cheap money; on the contrary, the Federal reserve banks made necessary rediscounts at 6 per cent and 7 per cent. Solvent enterprises were protected. Credit did expand, but on the old-fashioned theory which holds that emergency money should be paid for at steep rates, and that unnecessary borrowing in a crisis should be discouraged. Through the whole of this period (1920-23) the lowest rate on open-market prime commercial paper for six months was 4 per cent for one month in 1922.

OPEN-MARKET COMMERCIAL PAPER RATES IN NEW YORK CITY*
(Prevailing Rate on Prime Commercial Paper—4-6 months)

	High	Low
1920	8	6
1921	7¾	5
1922	5	4
1923	5½	4½

* *Annual Report of Federal Reserve Board,* 1927, p. 96.

Nor did the government try to make jobs during this period by taking on additional government employees; on the contrary, army and navy were steadly reduced, and the employees in the federal executive service were reduced steadily year by year from 691,000 on July 31, 1920, to 516,000 on July 31, 1923.

I have had two purposes in mind in presenting this episode of 1921-23. In the first place, I want to contrast it with what happened in 1933

and 1934 for the purpose of testing the doctrine that a great unbalancing of the budget and artificial cheap money are necessary as a means of bringing about business revival from the depths of a great depression.

The first rally in 1933 was an extraordinarily vigorous move. The Federal reserve index of production was just under 60 in March of 1933 and it ran up to 100 by July of 1933. But heavy government expenditures for the purpose of pump-priming were not employed at this time. On the contrary, the economy program, under the leadership of Lewis W. Douglas, Director of the Budget, was going into operation. The great spending program began in December of 1933. The first rally, March to July, 1933, was, in very large measure, a natural, inevitable reaction from extreme panic and depression. It started, as the weekly indices of production show, immediately with the reopening of the banks.

Speculative excitement following the introduction of the Thomas Amendment on April 20, also, undoubtedly, tended to intensify the upward move in business. Currency manipulation was new magic in the United States in those days, and the first time it was used the temporary speculative response was very strong.

In the later phases of this first great rally, there was, moreover, a sudden rush to produce before the NRA codes and the processing taxes could be applied, as businessmen recognized very well that, with NRA and the processing taxes, there would come a great increase in the costs of production. NRA and the processing taxes came in July and August, and the production curve turned sharply downward, reaching a level of 71 in November of 1933.

Then came the sudden abandonment of the economy program, and great spending for spending's sake. CWA was started, and monthly federal expenditures jumped from 505 million dollars in November to 703 million in December and 956 million in January. On January 4, the President announced the great spending program, and indicated that there would be a budget deficit for the fiscal year 1934, that is to say, by July 1 of 1934, of 7 billion dollars. The actual deficit realized in this fiscal year was 4 billion dollars, as it proved impossible for the government to spend money as fast as the first plans called for.

We saw the effect on business of this vast spending. If we credit all of the business history of the ensuing ten months to the spending, the record is very disappointing. Business rallied from 72 in November of 1933, on the Federal reserve index, to 86 in May of 1934. Then the curve turned sharply downward, and, by September, it had dropped to 71, one point below the level of November at which it started. In September, moreover, there came a grave disturbance in the government bond market, and grave concern regarding the government's credit.

I think that those who look upon government spending as a certain

magic for bringing about business revival should study very carefully this period, November, 1933, to September, 1934. This episode in our very recent history should surely shake confidence, on the part of those who have it, in pump-priming through government deficits, as a certain means of bringing about large results or lasting results. The first ten months of it brought business back to a point below where it started and did grave damage to the credit of the government. It was terribly costly, and the results at the end of ten months were less than zero.

My second main reason for presenting this 1920-23 episode in our history is to meet the contention of those who hold that the price mechanism can no longer be relied upon to co-ordinate economic activities, or to bring about an automatic re-equilibration and industrial revival, because of the growth of rigidities of one or another kind in the economic structure.

If perfect competition and full freedom of prices in all industries and activities were necessary for the essential functioning of the market mechanism, the case would be hopeless, and would always have been hopeless. But the mechanism can and does work adequately despite many rigidities, if only new ones are not continually being created. As recently as 1920-23, the immense flexibility of our American economic system was impressively demonstrated. We had, then, a great long-term debt structure, publicly regulated railroad rates which were increased at the wrong time, just as the crisis began, noncompetitive public utility rates, labor unionism far stronger than it was in 1929, varying degrees of competition and varying price policies among our great industries, and unequal declines in prices as the vast liquidation and readjustment came. We had to make a readjustment unprecedented in magnitude in our commodity prices and in the direction of our industrial activities. We had to liquidate a vast volume of short-term commercial debt, and to transfer from banks to investors—at a price—an immense volume of government war debt. The mechanism worked. In about thirteen months—from July, 1920, to August, 1921—we passed from a violent boom to the trough of a great depression. The readjustment of prices, wages, and types of activity, the liquidation or readjustment of debt, and the clearing of the air as to who was and who was not solvent were sufficiently accomplished by August of 1921 so that we can date the bottom of the movement at that time. The tide began to turn. Moving vigorously in the summer of 1922, there came a strong upswing in business, which reached boom intensity, with labor shortages in many lines, in February and March of 1923.

Those who hold that our situation is so rigid today that the price mechanism can no longer work must not make their contrast between our actual situation and some ideal picture of a frictionless "static state." They must show what changes have come since 1923 to make us too inflexible

to function, and they must show that these changes are inherent in the economic structure, rather than growing out of governmental policies. It is my contention that virtually all of the change since 1920-23 is a matter of governmental policy, and that a sound governmental policy, especially with respect to foreign trade, combinations in restraint of trade, price fixing and commodity price control, and money markets and capital markets will give us back an adequate flexibility.

In 1920-23 we allowed the automatic forces of readjustment freedom to take their course. Since 1923, as I have shown above, governmental policy has been systematically directed toward preventing readjustment. We artificially stimulated business by feeding it excess money and credit. We used artificial measures designed to prevent necessary reactions and liquidations. These things were intensified by governmental policy following the stock market crisis of 1929. Since early 1933, the mass of governmental interferences with free markets and governmental policies creating frictions and rigidities, has been appalling. Automatic forces work with difficulty under conditions like these! Even with all the handicaps placed upon it, however, the market-price mechanism is working today with remarkable efficiency.

The theses of the foregoing paper are not in conflict with the humanitarian demands made upon government for more widespread social welfare, for greater economic security, or for better distribution of wealth. The plea rather is that our economic mechanism should be left free to function with full efficiency so that there may be a rapidly growing social surplus out of which to meet these demands. Our great American economy, functioning with full efficiency, can carry a heavy load. But a chronically unbalanced government budget is a poor foundation for social security for anybody; and a crippled economic mechanism is a poor foundation for a more abundant life.

ECONOMIC PLANNING AND THE PROBLEM OF FULL EMPLOYMENT

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In discussing the problem of economic planning, I am going to assume that planning means authoritative planning. It is perfectly possible, of course, to have purely advisory planning of the sort whose efficacy depends upon whether the advice is taken by those who hold economic power. Planning, however, becomes vital only when we reach the stage at which decisions are taken followed by action. Consequently for purposes of simplicity I shall try to confine myself to the authoritarian aspect of planning.

The argument in favor of economic planning by government has often been made to depend upon the alleged superiority in allocation of specific resources attainable by the substitution of state authority for the decisions made by private persons and corporations under a system of laissez faire capitalism. One obvious test of this argument is to examine the record of the national economies in which a system of totalitarian planning is in operation. If this record is examined for evidence on this point we certainly do not find much support for this contention. Soviet Russia, the economy of which is the most comprehensively planned of all the totalitarian states, has not been able to avert recurrent acute shortages of goods which at times reach a condition of stark famine. Neither Italy nor Germany has been able to attain the level of production of socially desired goods and services which existed in either of these two countries when full employment of resources existed during the pre-totalitarian regimes.

If it were possible to add to the total of goods produced for ordinary consumptive purposes the stocks of munitions of war which are being produced in these countries the record would be more impressive, of course. But there can be little doubt that these stocks of munitions are not produced as a result of the same sort of demand as that which exists for ordinary consumers goods.

The strongest case for planning, however, does not depend upon superiority of resource allocation. Such popular discontent with the system of laissez faire as expresses itself in the support for planning depends not so much upon the belief that planning will produce an allocation of resources superior to that under a system of laissez faire when full employment exists but rather upon the belief that full employment is rarely possible under a modern system of so-called "laissez faire" while it can be attained under a regime of comprehensive planning. It must be admitted that the record of the totalitarian states does indicate that full

employment of resources can be attained under a regime of planning either under a completely collective economy or under a regime which preserves some remnants of capitalism as in the case of Germany. To the extent that full employment is conceived of as an end in itself, so much must be conceded to totalitarian planning. But full employment under wartime conditions could probably be easily attained by our own economy, although no doubt by means of the institution of a considerable degree of governmental intervention.

Even if the production record of the totalitarian regimes had been far more impressive than it has been, the question would arise of whether these material gains could offset the losses suffered in terms of human freedom. I think we should undoubtedly have to answer this question in the negative.

The experience of the totalitarian states does not prove that the extreme deprivation of individual liberty which characterizes these regimes is an inevitable concomitant of comprehensive planning. Nevertheless the record of these states does create such a presumption. For it is difficult to see how complete and authoritative planning could be carried on by a state organized with the constitutional devices aimed at the protection of the individual against the state which exist under the parliamentary democratic states. These devices may not always be as effective as one would wish in protecting civil rights of individuals, but they are very effective in hampering the state in functioning in a positive economic role.

The record of the relatively feeble attempts at planning under the New Deal have not on the whole been such as to strengthen the case for planning even among all those of us who participated in some fashion in these attempts. The growth of bureaucracy, the power exerted by pressure groups upon governmental administrators, the failure of planning efforts to attain the desired purposes, the suggestion of what a fantastically colossal task the centralized direction of an economy would become, all contribute to the conclusion that the amount of planning carried on by government should in general be restricted to the minimum which necessity dictates.

Although I am convinced that such experience as we have is decidedly unfavorable to total planning by government, I do not believe that the evidence indicates at all that the modern economy can be expected to function satisfactorily without a substantial degree of intervention by government. I am convinced, indeed, that the picture of our existing economy which the opponents of planning often present is fundamentally incorrect. This picture is essentially that of an economy which would operate at full employment if only government intervention in the economy were avoided. Ideally, in this economy of pure and perfect competition, equilibrium would reign, with just the right interest rate to insure

the best allocation of resources as well as the proper balance between refraining from consumption and investment, the right wage rate so that there would be no unemployment, the right prices for commodities so that marginal costs and prices would coincide, with all factories producing at capacity, with all entrepreneurs having no concern for the market but producing and putting their goods on the market for what they would bring or withdrawing and going into other lines of production, etc. No one maintained, of course, that such ideal conditions ever existed, but an economy without government intervention was supposed to approximate these conditions.

Instead we actually have quite a different sort of economy. Primarily it is more and more an economy in which the entrepreneur must be conscious of the effect of his actions upon the market price of his product, in which the pricing process becomes more and more one of "administration," in which, furthermore, considerations other than those of immediate profit influence the decisions which have to be made. For instance, anyone who has followed the history of the price and wage policies of the steel industry during the past couple of decades would find it difficult to explain these policies in terms of old style competitive price analysis. The most recent price decisions taken by the industry apparently reflect considerable concern for public opinion, fear of governmental action, and some sense of responsibility for the whole price level of our economy.

Our present economy is one in which wages are not determined primarily by competition between numerous employers on the one hand and between innumerable employees on the other but instead largely by negotiations between corporations or associations of employers and labor unions; in which the interest rate is less affected by variations in men's willingness to refrain from consumption than it is by a complex of the state of business activity, the decisions of the Treasury and the Board of Governors of the Federal reserve system; in which the amount of capital goods which comes into existence is determined less by the interest rate than it is by the expectations of entrepreneurs; in which the expectations of entrepreneurs depend upon the existence of a general demand for commodities which in the economy of the nineteenth century could usually be taken for granted.

In the economy which actually exists, full employment is no longer something which will automatically occur as an innumerable number of competing entrepreneurs make decisions which keep the economy in balance. Whether under conditions of full employment or not, the economy is now governed by more or less conscious decisions made by few enough individuals or institutions so that the process cannot be viewed as substantially an automatic one. Incidentally, it is apparently true that the

greater the degree of unemployment of factors of production, the greater the degree of "administration." The most important and practical result of this is that our economy is always liable to find itself in circumstances under which the purchasing power for the product which it is capable of producing is not available. The reasons why this purchasing power is not available at a given moment are very complex and differ from one conjunctural period to another. For example, the critical factor at one moment may be the fear of business to expand plant; at another time it may be the fear of consumers to spend. Factors of a different order may be the relatively too high price of structural steel or the relatively too high wages of labor in the building trades, to mention only a very few.

This means that the economy is to a degree at the mercy of a great number of largely unco-ordinated decisions. In the typical capitalistic economy of the nineteenth century these unco-ordinated decisions did not usually produce trouble, for the relative simplicity of structure of the economy and the multiplicity of the productive units making it up was such as to produce, paradoxically enough, a high degree of over-all automatic co-ordination.

It is not merely that the complex of institutional decisions which are made in course of the functioning of our present economy may or may not produce conditions of full employment. The complex of decisions which are made may produce full employment under widely varying combinations of economic factors and forces.

It is doubtful whether ever since 1914 our economy has provided employment without some "artificial" insertion of purchasing power. During the war this artificially created purchasing power was provided by the demand for munitions. For a time after the war it was provided by the land boom in the Middle West. Following the collapse of that boom in the depression of 1921, purchasing power was provided by a combination of urban real estate booms, the securities boom, loans abroad, and installment credit.

I wonder whether we are all quite sure that if there had been no real estate booms, no securities booms, no loans abroad, and no installment credit, the capital funds which were so employed would otherwise have been invested to increase the output of consumers goods whose purchase would have been made possible through lowered prices or higher disbursements to laborers and other producers? For if we are to continue to espouse the theory of an automatically regulated economy, that is substantially what we must believe, unless we are willing to allow the economy to depend upon more or less fortuitous booms for the necessary purchasing power to keep it functioning.

Just as full employment has been attained in the past under widely

varying conditions so might full employment be attained in the future. We might attain full employment by means of a huge increase in the construction of public works, by means of directing the economy towards the production of munitions of war, or through a huge expansion of the capital goods industries. It is just barely possible that full employment might momentarily be attained by the election of Herbert Hoover in 1940 and the repeal of all New Deal legislation.

We might attain full employment with a high interest rate or a low interest rate, with high wages or low wages. It might be easier to attain full employment with the interest rate relatively low than relatively high, with wages relatively low rather than relatively high, but we surely can conceive of at least temporary full employment under certain circumstances in either case.

It might be desirable to take the example of the wage rate to explain what I mean in this connection. I believe it has been at least implicit in what is generally understood to be orthodox economics that there is at any moment a natural rate of wages which would be worked out through the principle of marginal productivity if neither the government nor trade unions interfered and that no wage higher than this could be paid by industry which would be consistent with full employment. Most economists who have held this view have, I believe, explained unemployment of workers, and indeed of all factors, in terms of misguided efforts to raise wages above this "natural" level. Many who have held this view have believed that wages during the last ten years have been so high as either to cause the depression or to be responsible for its continuance, or both. Some have taken the position that there could not be any expansion in employment of workers during this period if there were any general increase in the level of wages. Indeed, I think these latter have been more consistent and logical in their position than those who have balked at this final step.

Now we know that it has been possible to expand employment during this period in the face of rising wages, for the simple reason that it has happened. It is perfectly possible that employment might have expanded more rapidly had wages not advanced so much, but the important fact is that employment did increase along with wages. I wonder how many of us are sure that we could not attain full employment with the present wage structure if we could have sustained demand for the products of industry? Suppose that the needs of the Allies in the present war were great enough to produce a constant expansion in the demand for the products of our industry. Suppose further that the Allies could pay for their increased purchases either with gold or through the sale of commercial securities. How many of us are sure that substantially full employment could not be achieved if this wartime demand were strong

enough and lasted long enough? Nor would the process necessarily result in lowering of real wages, if the output of consumption goods for sale in this country increased concurrently and sufficiently—and it is not at all impossible that this could happen.

It would be just as easy to sketch a hypothetical situation in which full employment might have been reached with the level of real wages somewhat less than it actually has been, although in this case I am quite sure purchasing power would have had to be provided in some fashion or other, through increased dividend disbursements, increased expenditures for capital construction by business, social security payments, increased governmental expenditures, or by some combination of these and other ways.

Another way of attacking the same problem is to suppose that all economists had been asked in 1933 what they thought the most desirable level of wages would be in order to promote employment. We would have certainly received a wide variety of answers. Now was there some one answer which was right and would all the others have been in greater or less degree wrong? I think the answer must undoubtedly be that full employment could have been attained with a wide variance in the wage level, while under certain circumstances no wage level would have made full employment possible.

In other words there was no one wage rate which was the "natural" one and which if government and the trade unions had permitted it to exist would have produced full employment or would have guaranteed the maintenance of full employment after it had once been attained. If the Federal reserve system and the Treasury followed an easy money policy it might have been more advantageous to have had one level of wages; if a different monetary policy had been followed, a different wage policy might have been advisable. So with the factor of business confidence. A level of wages might be consistent with full employment under conditions of buoyant business sentiment, while another level might be more conducive to increased employment under conditions of business despondency. Further, while full employment might be attained with either wage level, it is quite likely that one of the two would be superior from the point of view of the duration of full employment.

In a certain sense this has definitely optimistic implications. There is not some one perfect condition of balance which must be obtained in order to have full employment, and consequently the chances of its attainment become the greater. But the implication is not wholly optimistic. The condition of full employment is not synonymous with that of a perfect economic balance which could be expected to maintain itself if undisturbed on account of some fundamental superiority.

While just now our immediate concern seems to be to get full em-

ployment under any circumstances, the problem is not only to attain full employment but to attain it without using means which are in themselves socially disastrous, such as war or setting up a totalitarian regime, and to attain it so that there will be the minimum of forces pushing towards a new collapse with recurrent unemployment of resources.

Whether we are going to approach full employment of resources in the near future and whether we shall approach full employment under circumstances more or less socially desirable will not depend simply upon automatic forces. Nor do I believe this would be so if government could be induced to refrain from action in the economic field altogether. Whether we attain full employment and how we shall attain it is going to depend upon a myriad of factors and the interaction of those factors on each other. It will depend upon the decisions made by the Board of Governors of the Federal reserve system, the Treasury, and the President of the United States with regard to monetary and credit policy, upon the decision of the officers of the United States Steel Corporation with regard to the price of steel and the wages of workers in the steel industry, upon the decisions of the union leaders with reference to the wages in the building trades, upon whether or not we maintain our present cash-and-carry policy with regard to the sale of supplies to warring nations, upon whether or not businessmen follow optimistic investment policies, and so on *ad infinitum.*

Human beings will make these decisions and some of them will be crucial. It is impossible that they could all be co-ordinated by some central intelligence. If it were possible for omniscience and omnipotence to do so, no doubt we would indeed have the optimum utilization of resources. Fortunately we can get along not too badly upon something much less perfect. When the concatenation of administrative decisions does not produce full employment it is always possible by means of governmental intervention in the form of relief and employment creation projects to bridge over a crisis without social disaster. It would be preferable, of course, if this could be done with the maximum of efficiency and economy on the one hand and on the other that businessmen should not be frightened out of their wits when it does become necessary.

This is not to argue for a moment that our economy operates on the basis of purely arbitrary decisions of entrepreneurs and institutions. In the vast majority of decisions which are made there are very definite factors which determine the limits within which decisions may fall. But these limits are often broad enough so that the decisions which are made, either individually or cumulatively, may produce unfortunate results for the whole economy. Yet these limits paradoxically enough may prevent the total results to our economy from being utterly disastrous.

To say that the economy is at the mercy of decisions of the sort I have

described is to leave the picture far too dark. It seems highly probable that if we can give over the idea on the one hand that our only alternative is to adopt a system of totalitarian planning and on the other hand give over the idea that the economy would operate automatically at full employment if the government would not intervene, we would have helped to clear the ground so that the institutional control of our economy would have a better opportunity for socially satisfactory evolution.

If it were generally recognized, for example, that decisions which had to be taken often involved considerations other than those of the most immediate profits of a particular firm, the decisions which were made, even without governmental control or regulation, might be wiser. From a longer range point of view, we could even someday start training economists who would serve business in making these decisions. As long as we hold to the belief that business enterprises do not have to concern themselves about such matters, this is of course not feasible.

Thus our economy is one in which, for many of its sectors, critical decisions have to be made by institutions or by individuals or small groups of individuals, who represent larger groups of employers or employees or independent producers such as farmers. It is going to be necessary to slowly evolve the relation of government towards the various sectors of our economy in which this is true. In some cases this will mean an attempt to strengthen competition and to preserve as long as possible as much of the old market economy as possible. In other cases limited regulation by government and in still other cases the status of public utility regulation might be preferable. The problem of specifically undesirable trade practices would still remain, of course.

If there is anything which we should have learned from the fluctuations in production and consumption during the last couple of decades it is that we can never be sure that the composite of economic decisions made by corporate executives, small businessmen, labor leaders, bankers, consumers, savers, and others will produce the aggregate of purchasing power necessary to take the product which industry is capable of producing off the market. I may say parenthetically that this is too simple a way to state the matter but for the present purposes it will serve. Certainly it is impossible to deny that over and over again during the present depression we have had temporary revivals of production which faded out because increased production could not be moved out of warehouses or even off the assembly lines.

It is almost certainly going to be necessary for governmental agencies to intervene in this situation in the future as has been done during the present depression in an effort to keep up the demand for commodities when it would otherwise seriously flag. This intervention can be expected to follow the already familiar channels and perhaps some new ones as

well. Intervention through monetary policies of the Treasury and the Federal reserve system, the federal taxing program, public works, and so on are likely to continue to be used for this purpose. It is immensely important, however, that the theoretical background necessary in order that decisions of this sort can be most wisely made should be further developed. Likewise the possibility of new devices which could be employed with the minimum of detailed intervention in the operation of individual and corporate business should be studied. For example, the possibilities of the development of the federal social insurance system with the goal of adapting its functioning to the long-run aspects of the provision of purchasing power certainly deserves further study.

But apart from the part which government is to take in the direction of the different sectors of the economy there will arise an ever growing need for the recognition of the heads of aggregations of capital and labor that they must make decisions which involve a sort of planning. The decisions which they must make are likely to be governed by factors much different than those which governed the decisions of enterpreneurs in an economy of small-scale competing industries. It is possible that some sense of public responsibility could be developed among the leaders of industry and labor so that planning decisions would be made in which the shortest-term interests of the men who make the decisions would not always prevail. Finally, it is first important that it be realized that in many of the decisions made by corporate executives, labor leaders, bankers, and government officials, aggregate purchasing power is likely to be affected. Guidance in making decisions which will not have unfavorable results in this respect depends primarily upon the development of a more adequate economic theory in this field.

The problem of deciding what the irreducible minimum of regulation and control by government agencies must be throughout the economic complex becomes likewise more nearly capable of solution once we abandon the concept of a deceptively simple economy. We are never going to have a final solution to this problem, since the decision every year would properly be different from that of the year before. We can only depend upon a sort of evolutionary groping towards a solution. But I have considerable confidence in that process of evolutionary groping if we can exorcise the *poltergeist* which manifests itself either in the form of the conviction that we must set up totalitarian planning or in the form of the belief that if we remove all governmental control a nineteenth century economy will once more materialize.

PLANNING FOR PEACE

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I

Modern planning was first undertaken in the World War, when scarcity of commodities and shortage of man power led to an attempt at substituting central state control over production and consumption for consumers' sovereignty. No profound change of principles in economic management was intended; a series of purely opportunists measures each of them the unexpected outcome of previous measures was taken, which finally looked not unlike a deliberately devised system of planning, with a strong collectivist undertone. The Code of War Legislation under which this planning was made possible in Great Britain was abbreviated in "Dora" (Defense of the Realm Acts). Since many of them could be described as socialist, war planning might be defined in racing language as "the offspring of Karl Marx out of Dora." This affinity between compulsory war economics and coercive collectivism had appealed to socialists even during the war; they and their sympathizers desired for this reason to continue planning in peace.

Planning for peace is, however, different from planning in peace. Its object is not a better structure of income, output, or enjoyment; it is not aiming at the abolition of consumers' sovereignty but at the prevention of war, either by eliminating its causes or by obstructing armaments or in preparation for war.

This was the topic originally assigned to me. It could be accomplished by peace loving nations through the formation of pools in key materials, on the possession of which long-sustained war efforts must depend. I had outlined a plan for achieving this a year and a half ago. It suggested the co-operation of the great raw material producing countries, especially the United States and the British Empire; it tended to establish simultaneously a certain stability of prices—an attempt which was bound to fail on a purely national basis—and a fair distribution of such materials. An international administration was to be formed to insure a fair share of such materials to all peaceful consumers and to prevent at the same time the accumulation of war reserves by aggressor countries. This planning for peace implies the imposition of a workable system of prewar sanctions; it must be closely co-related to disarmament, with the double intent of making war superflous from an economic point of view, since all legitimate demands would be satisfied, and of making it so difficult for would-be aggressors as to nip it in the bud. Economic sanctions to stop war after it has broken out have failed, mainly on account of improper application.

Prewar sanctions to prevent war have never been tried. The mere fact that Germany went to war at a time when she considered herself sufficiently well equipped to face the Allies proves beyond doubt that no serious efforts were made to prevent her from arming; it demonstrates, moreover, the baselessness of her claim that she had no raw materials. There is no use in taking up this problem at the present time. It is more to the point to discuss whether and what plans can be made for permanent peace.

II

This involves a threefold issue: frontier (territorial) planning, structural planning, and functional planning. Territorial planning covers attempts at drawing frontiers in such a way as to safeguard adequate natural resources to every nation; structural planning deals with the structure of states as a factor affecting peace, and functional planning devises measures by which the functions of existing societies can be so modified as to safeguard peace.

The second question can perhaps be most easily answered. Does any particular structure of society guarantee peace? If so, must it be accepted universally and can this be done by peaceful measures without civil war? It has of late been the fashion, especially in Anglo-Saxon intellectual milieus to assert that wars are mainly due to the capitalist system, which but for them would wither ignominiously. I doubt very much whether Karl Marx, who after all was a very learned man, would have enjoyed this "rebunking" of history. In a purely factual way this question has been settled by Stalin's unsolicited, magnificent contribution to the theory of social evolution: his invasion of Finland, which proves satisfactorily that communist societies act in no way different from bourgeois societies when faced by similar dangers, though of course their noble motives justify ignoble methods in the eyes of the faithful. This problem might be nonexisting after the transformation of all states into equally well-advanced socialist or communist republics; it would be far more difficult to settle by peaceful means than the program of the Manchester Liberals which demanded peace, free trade, and good will amongst nations. Civil war on the scale of a world revolution might moveover be rather a high price for external peace. And it must be pointed out that the structure of aggressive states like Germany, Italy, and Japan is very much more collectivist than of the older, more peaceful capitalist societies.

The main economic problems of peace will arise from the position of these aggressive, collectivist states. The present economic system of Germany, which is the most perfect type of war collectivism, pivots around price and exchange control. Exchange control has enabled Germany to maintain a fictitious parity of the mark to gold; it had made it possible for her government to regulate her foreign debts in an arbitrary way. It

has very nearly stopped the flight of capital. It has successfully isolated the German price level and handed over to the government the complete control of foreign trade relations. It has made tariffs almost superfluous. By refusing exchange for the purchase of particular foreign goods, the government can differentiate between different classes of imports; it can shift purchases from one country to another, and even discriminate between individual firms. Exports which must provide foreign exchange need not cover costs; they can be subsidized from profits made in the home market. As long as the value of the total national output leaves a sufficient margin over costs, a percentage for wear and tear, and sufficient scope for essential new equipment, a country can be kept going. Thanks to this system Germany has been able to squeeze great quantities of material from foreign countries, on terms she thought advantageous. She was never unable to pay for raw materials, but she suffered by diverting it to uneconomic purposes and by investing it in armament plants. She has narrowed the margin of national profits by preferring the production of national goods under most unfavorable conditions to imports from abroad. Her physical plants will be much deteriorated at the end of the war. She cannot draw many supplies from abroad; since neither accumulated reserves nor current production will suffice, heavy inroads on her physical capital are inevitable. A large part of her national savings has gone into war plants; they cannot be turned easily to competitive markets, once government orders cease. Her railroads are physically in a bad shape; her forests overcut, repairs are neglected, the soil may deteriorate, and labor will become less effective. Germany has developed an all-round system of war economy, with fairly stable prices. By a combination of rationing and control a rapidly growing percentage of everybody's income is taken over by the state in taxes or loans. Collectivism permeates the pores of her economic body. An ever increasing part of the nation's wealth is lent to the state, and the state digs deeper and deeper into the pockets of its subjects. Property rights are still maintained, but greatly weakened; their possessors are not expropriated; they are degraded and turned into functionaries, who work under the state and for the state. A kind of collectivist hierarchy in the form of military or barrack-room socialism has been established.

This system is much more collectivist than any of its predecessors, though it is by no means egalitarian. It is more nationalist than anything yet devised, for all its functions are becoming state functions, invested with the dignity of a sovereign government. It has been organized on the theory that war is the normal occupation of society. Can it be switched effectively towards peace objectives, or can it be scrapped in order to guarantee peace?

Whilst Germany maintains her system of exchange control, her collectivist structure will scarcely disappear. It is not easy to change. Unfortunately, it cannot simply be replaced by devaluation, even if devaluation

were to go very far and to wipe out most of the value of the mark. The German people will be greatly impoverished. They will no longer be able to pay for large quantities of foreign luxury goods, like tea, tobacco, and coffee. Whilst the need for paying for them by export will thus disappear, the markets which were willing to purchase German goods will be dislocated. Germany will find it very difficult to sell goods abroad in order to get the raw materials needed by her manufacturing plants; for once her power of coercion has gone, the "blocked mark" game with her neighbors will no longer pay. A system of autarchy need not bother about costs of individual branches of industry; a competitive system must. Germany will find it very hard to adjust herself to foreign markets. She will scarcely be able to start without raw material credits, and she may not get them as there is no certainty of her being able to repay them by foreign exports. It certainly cannot be done before her old debts are settled, and no settlement will be really satisfactory to her creditors.

The transformation of Germany's semiautarchic collectivist economy into a freer system must involve a great deal of suffering. The German people may not be inclined to run the risk of returning to a social system which neither offers wealth nor wages all round, if the rest of the world is not ready to help them. And the rest of the world will have to face the issue whether it prefers to offer loans and opportunities to a nation which may not use them wisely, rather than to confront a dismembered, disgruntled, collectivised race which must cling to spartan simplicity because it cannot afford anything better.

III

The father of modern planning, J. G. Fichte, held the opinion that wars were due to international trade rivalries and to the struggle for colonies. In order to insure peace, trade should be completely dropped. Every country should become self-sufficient and organize production and consumption by planning. The great inequalities in territorial resources between various countries should be moved by the exchange of territory against gold. In a self-sufficient economy, gold, he argued, would no longer be needed; it should be used for making the necessary territorial adjustments by buying land for insufficiently-equipped nations. Unfortunately this method is not applicable in present-day circumstances, for the countries who desire additional territory have no gold. Moreover, exchange of territory, especially on a large scale, has become difficult since the advent of modern nationalism, to which frontiers are mere functions of race which must expand whenever the race increases in numbers. They must moreover include all areas inhabited by members of this race who live under foreign domination. This concept has hitherto caused unsurmountable difficulties, since frontiers frequently cut across nations until Hitler made a magnificent contribution

to planning by repatriating the Germans in the Baltic without an exchange. In his view Germans living abroad should be so happy at being reunited with the mother country that they should gladly accept compulsory repatriation and relinquish possessions and opportunities abroad. Thus a race which has not sufficient living space at home can yet be made happy by the addition of exiled brothers and sisters. The temporary reduction of its standards of living, which this would imply, will be offset by an increase in numbers which will raise its military strength and enable it later on to conquer additional lands.

Territorial redistribution on such a scale as to bring about universal contentment amongst the European nations is, however, not likely to happen. A victorious Germany would not aim at permanent peace; a German defeat, on the other hand, would scarcely offer to Germany, Italy, or Japan the living space they crave for. The non-German nationalities in central and southeastern Europe would not accept German domination and offer their lands for German settlements. They would scarcely be willing to exchange their domiciles with Germans by triangular arrangements. There is no reason to assume that the Poles in occupied Poland will be ready to leave their country and to go to Rumania, from where transylvanian Germans could return to Germany.

Small rearrangements might be possible since Hitler himself has shown the way. They do not solve the problem of living space. Nor would the exchange of a few colonies help much, since the total additional resources thus gained would not be very considerable, especially as poor countries do not possess capital for developing colonies rapidly. The pooling of colonies by an extensive mandate system would help even less. It might be a moral concession; it is not an economic cure.

IV

There remains a third possibility: functional planning, the working of existing institutions in the interest of peace. As change in the structure of society is not likely to guarantee peace, and as no adequate redistribution of territories is to be expected, a sterilization of frontiers might accomplish this object. If frontiers were no longer obstacles to international economic intercourse they would lose part of their sinister significance. The poorer countries could participate by free imports in the wealth and in the untapped resources of richer countries. Some vision of this sort emerged in the middle of the nineteenth century, when huge, comparatively unhampered trade movements were accompanied by mass migration and large capital transfers. But these days of "the winning of the west" have gone for good; the period of primary colonization is over. No resumption of large migration movements is likely to happen. A thorough sterilization of frontiers would moreover imply a considerable shifting of men and wealth

towards the most favored parts of the earth; it would end in the mixing up of nationalities, and greatly deplete poorer countries. The transition would be extremely painful and very expensive, though of course very much less painful and less expensive than a series of world wars. As it would disturb the relative importance of many states it is very unlikely that their governments would favor it.

There has been a tendency towards a reduction of sovereignty in the political field as shown by the formation of the League of Nations and the various schemes for collective security. It was accompanied by an inflation of economic sovereignty which culminated not so much in the adoption as in the apotheosis of currency manipulation, the most effective measure of ruthless nationalist planning. By its very nature planning expands the sovereignty of the state at the expense of the sovereignty of the consumer. The same governments who earnestly strove for collective scurity in politics increased insecurity in economics by fostering isolationist's separatism as the natural outcome of national independence. I doubt very much whether the vested interests in various countries—and in this respect labor is as much a vested interest as capital—would permit a thoroughgoing sterilization of frontiers. The attempt could only be successful if efforts were maintained over a long period; but before the pains of transition were over a violent reaction would set in. Governments, after all, are not in the habit of abolishing themselves or of diminishing their own importance, especially since they control today very much more efficient weapons for economic aggression than tariffs. Quotas, embargos, and currency manipulation can easily circumvent or undermine old-fashioned international commercial agreements.

But there is one method by which frontiers have been made innocuous in the past: federation. Governments have sacrificed part of their sovereignty when menaced by grave dangers or when large tangible benefits were held out to them. Federation did not prevent the shifting of economic and political power between member states. In fact, it facilitated it. It made it, however, harmless, provided the strain was not so great as to lead to civil war. Are the poorer, dissatisfied states today ready to enter a federation and to see their relative importance diminish, in return for the promise of permanent peace? Are the more powerful states prepared to barter away the sovereignty and the independence they believe they can go on enjoying for the hope and the responsibility of becoming the leaders in a world commonwealth of nations?

All belligerents will be impoverished. Whilst the allies may escape serious inroads on their physical national capital by parting with gold and foreign securities and by relying on credits in the Dominions, their position as creditor nations will be shaken. They must either reduce imports considerably or increase exports. The pressure of taxation will diminish

imports, whilst exports can grow only if the purchasers of European investments will increase their consumption of foreign goods; the outcome will depend a good deal on the commercial policy of the United States. As it is, the United States has difficulties in disposing of her surplus products. These difficulties will increase greatly when her customers have been impoverished; and they would become almost unsurmountable when repayments of interallied debts are resumed. The handling of interallied debts by European governments has not been a very creditable performance; and the lending policy of the United States in the postwar period has not been very wise. An exchange of mutual recriminations, whether justified or not, will not correct past errors. No plan for peace, however, is workable without a previous settlement of international debts. For without it, currency stabilization is out of question and without some sort of stabilization normal international economic relations cannot be resumed. As long as devaluation or exchange control can be freely resorted to, economic national sovereignty is unlimited. They make intelligent planning for peace impossible, except when managed by a supreme world government. They have so far offset most modest efforts for international co-operation, such as commercial treaties, stable tariffs, or the most-favored-nation treatment clause. Anyone who wants to plan for peace must insist on currency stabilization. If he prefers to do so without a return to some sort of gold standard, I make him a present of the additional difficulties which will have to be encountered.

The impact of the war has already resulted in some sort of provisional stabilization, in the pooling of resources, and in talks on federation.

The leading statesmen of the world hold out a promise of a federation of the world or at least of Europe. The establishment of such a federation would guarantee peace, provided it were not broken by civil war. No federation can be established which does not sterilize economic frontiers whether represented by tariffs or by less visible obstacles. Can we really hope that British and French statesmen are ready to scrap their economic boundaries and to admit all nations of good will on equal terms to a share of their internal markets? Do they really plan a kind of European customs union the members of which will enjoy complete equality of opportunity? It would imply not only an assimilation of tariffs but of taxation, transportation, and immigration policies. It would have to bring in the colonies controlled by the mother country, whilst the independent dominions might stand out. The political problems presented by such a union might be pushed back. The various German states which later formed the German Empire retained political sovereignty under the Zollverein. A customs parliament was established on a very democratic basis which passed tariffs and was exclusively limited to economic legislation. Something of this sort might be attempted as a halfway step to European federation.

But the economic need for federation is not very pressing in the great empires; the smaller and poorer countries feel cramped, and the economic importance of federation does not so much lie in the elimination of frontiers as in the cessation of government efforts fostering national industries which are superfluous from a consumer's point of view and of intensifying agriculture which should rather be contracted. When countries federate who produce the same goods but have no markets for them they will not profit very much. But when complementary countries join one another and especially when they represent well-established geographical units they can prosper.

For a long time the space in Central Europe between the French and Russian frontiers was filled by two custom unions, the German Reich and the Austrian monarchy (which at one time reached deep down into Italy and into the Adriatic). During a few decades Austrian statesmen endeavored to combine both areas in one custom unit. They failed in the teeth of Prussian opposition. But the idea never died completely. The present German government is trying to accomplish it by unacceptable methods. They still fail. No Central European economic union can last which is built on the subjection or the eradication of non-German people. The greatest obstacle to a reasonable solution of Central European problems is the animosities which the Hitler regime has aroused. As long as they last, political federation is out of the question. But intergroupal business arrangements might be possible. A kind of customs union between Austria, Czechoslovakia, Hungary, and Poland might be accomplished, and a similar one might be established between various Balkan states; it is unlikely that these two groups could be fused immediately into a single unit. But they could grant preferential treatment to one another and, on the basis of reciprocity, to a regenerated Germany and to Italy. No large customs union is yet possible. Political sovereignty would be maintained, except in so far as modified by membership of the League of Nations, but economic sovereignty would be curtailed. The Central European groups would not attempt to form a self-sufficient unit; they could and should not do so. They should continue to rely on foreign trade and on foreign credit, but they should be allowed to make preferential arrangements among their members irrespective of the most-favored-nation treatment clause, in the same way in which the members of the British Commonwealth of Nations have been permitted to make use of concessions amongst themselves.

Some plan of this sort will have to be devised if we desire permanent peace. It may frighten some, for it accepts the fact that eighty million Germans can neither be ignored nor wiped out, and it assumes that they will be much less dangerous when they are prosperous and, being wedged in between other people, are co-operating with them, than when they are starved and feel ostracized. But the process of regimentation in Germany

may have gone too far to permit such arrangements; in that case a collectivist Central Europe seems inevitable.

I have tried to outline a plan for the future, from the facts of the present, and the discernible tendencies of the past. It is very modest, a mere beginning; it may not appeal to ardent world reformers; on the other hand it may well arouse criticism of people who concentrate on existing difficulties. It may offend realists as well as idealists.

Nothing to my mind is more contemptible than that sort of realism which meekly bows its knees to facts, and invests them with divine immutability. I have no use for it. But nothing on the other hand seems cheaper to me than the sort of idealism which soars so high that it cannot be burdened with facts when rushing merrily through empty space.

THE GROWTH OF RIGIDITY IN BUSINESS

(A series of four papers and discussion)

DURING THE MIDDLE AGES

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I

In the behavior of business there are two extreme patterns. One is elasticity with many rigidities. This is the pattern that has grown up unplanned and has spread its variegated self over the pages of history. This is the real behavior of business as we know it—elastic, fluid, even fickle. In this system some men gain wealth; others are thrown into poverty. All strive for income, but most find that circumstances, including rigidities, hold them back, sometimes from disaster, sometimes from success.

The other pattern of business behavior is still an ideal, not a reality. This is stability aimed at through the operation of some system or through planning. Men have never ceased to long for a golden age, a haven of safety, and a utopia of dreams. They have reacted from the elasticity that has put them upon their mettle and ended by giving them only a competitive reward, one too small to meet their needs. In the dream world of relief from a too elastic behavior of business, resulting in suffering and uncertainty, men have cried out for stability. They want no depressions and no unemployment. They want none of the uncertainty that lies in elasticity. They want a stable income. Their leaders realize, however, that, in attempting to secure elasticity, they might create conditions that would become fixed and act as a drag on general progress. For instance, it is a commonplace that a minimum wage tends to become a maximum wage. Fearing to go too far away from elasticity, the leaders amplify their ideal of stability by calling for "stability without rigidity."

In emending their slogan in this way, the proponents of stability proclaim their fear that their efforts at stability will in fact involve more or less rigidity. Thus, in the two antithetical patterns of business behavior there is in the one case an actual rigidity and in the other case a hypothetical or anticipated rigidity. In other words, in both the elastic and the stable patterns of business, rigidity plays a part. It seems to be a safe conclusion that rigidity is an ever present factor to be reckoned with in business, both in the systems that in fact have evolved and in those that may be devised.

The importance of a factor that may act as a drag on the attainment of an ideal or the execution of a policy is hardly to be gainsaid. A little reflection shows that the subject requires theoretical analysis and historical exposition. At present we have but little of either, for business behavior,

except in its cyclical aspects, has been little considered in detail, at least for publication. What we can do in this conference is probably largely exploratory and inconclusive. We may hope, however, that the different points of view and the various facts and generalizations presented may be helpful in our thinking on the subject in the years to come.

As the first speaker on this occasion, I shall attempt a small amount of theoretical analysis, largely to put the subject on the breadth of base which I think it should occupy. Then I shall indicate some historical beginnings, particularly during the middle ages when our present business structure emerged from a nonbusiness order of society.

Just who was the first thinker to discover and record an example of rigidity in business is unknown to me. The wage-fund theory goes back at least to Malthus. According to one statement of this theory, the wages of labor are dependent upon a certain amount of capital available at the time for this purpose. After being restated and refined for two generations, the theory has been abandoned, at least in its extreme form.

A second example of rigidity is found in the study of prices. This price rigidity was recognized probably before the wage-fund theory had been enunciated. The influence of custom, monopoly, and other factors was observed at the time classical economics was taking form. It is interesting to note that there has been a dispute as to whether price rigidity has increased or decreased in recent generations.

Thus, we see that rigidity in business has been recognized, though largely from the standpoint of economic theory rather than business administration. What we need is to have some one think the subject through and give it just as broad a theoretical treatment as is practical and useful. At this point we can do little more than note some essentials.

We may describe a rigidity in business as a condition or circumstance found in a man, a group of men, or an institution which operates as a drag on business. It is a factor which often impedes the attainment of an objective in business. For instance, the family pride of such a man as John Claflin prevented him from giving up his ancestral wholesale business even though he knew that his wholesaling firm could not succeed. On the other hand, it may save from destruction a business or whole groups of firms; or at least it may tend in that direction. In times of depression, for instance, a fixed money income possessed by consumers greatly aids the retail trade wherever it exists.

Rigidity may arise inside business or outside. Examples of rigidity are found in church canons, national laws, popular attitudes and customs, fixed business policies, and the temporary success of business techniques. On the other hand, there are nonrigid factors tending in the opposite direction. Such are man's changing moods, the policy of adaptation, creative merchandising, research, and agricultural production. It is the interplay of such

factors that make up the behavior of business which we observe in history.

We should frankly accept rigidity as a force or perhaps a counterforce. We may put the situation this way. Dynamic forces arise within business or on the outside. Then rigidities or counterforces come into being either within business or on the outside. We should all agree that the greatest dynamic force in private business is the drive toward profit. This is met by outside rigidities on the part of consumers and workmen. The greatest dynamic force in communism is the sharing of income according to individual and family needs. A potential and at times an actual rigidity, as we know from Russian experience, is found in the producer's drive for a profit. This is where the system of public capitalism is likely to break down.

The point at issue is that a force in one place is met by a counterforce (a rigidity) in another place. No treatment of rigidity in business is adequate unless it is based on this duality of origin. Some are inclined to emphasize the rigidity of businessmen in adjusting themselves to external change. They urge that a large part of business administration should consist and does consist in adapting policy and management to social and scientific environment. As an historian, however, I cannot help being impressed with the number of times that the primary force has lain within the field of business and the counterforce has operated on the outside.

A strict interpretation of the subject under consideration would, of course, confine our interest to rigidities which arise within business as counterforces to primary forces which have grown up on the outside. A broader interpretation, such as was originally intended, might lead to an alteration of the title to "the growth of rigidities affecting business."

If we were to attempt a complete analysis, we should have to go far beyond the limits of the present paper. We should have, for instance, to urge the point that the rigidities must be studied in close relation to the changing general business background. It is essential to consider whether the rigidity occurs in a buyers' or sellers' market; in a period of depression or a boom; in a period of pessimism or optimism. If the rigidity operates in a period of bad business or depression, the rigidity may be helpful or it may be fatal. If it functions in a period of good business, it is likely to be only mildly injurious, at least for the time being. At any rate, the rigidity should be examined in the light of prevailing business conditions.

In the brief and partial enumeration of examples of rigidities and nonrigid forces given above, there is no declared emphasis on any type of factor. The economist is inclined to stress costs and prices. The student of business would prefer to dwell upon policy and management as providing the more persistent and dangerous rigidities and also the more incisive and far-reaching elasticities. Actual business shows how to carry on, even though there be new and rigid costs imposed from the outside. Some chain stores, for instance, have learned how to meet the problem of high wages and

taxes by not employing so many workers nor having so many units to tax. Some have shifted from corner stores to super-stores. As long as theirs is a policy of adaptation there can be little or no effective or dangerous rigidity in costs. Perhaps we might all find a challenge in the thought that most fatal rigidities lie in the hardening of the arteries of business executives. And, yet, we should at the same time recognize that there is a Plimsoll line beyond which it is dangerous for governments to go in heaping upon business burdens that become cumulatively intolerable. In other words, inside elasticities can be swamped by outside rigidities; and there is evidence in the world today that this is happening in certain countries where too much planning is under way.

II

Let us now turn to note some of the aspects of the historical development of rigidity, particularly during the middle ages. Many of the illustrations which we shall use are well known; it is chiefly the interpretations and implications that are novel.

As we enter the middle ages, we find ourselves in a land of churches with holy incense rising on high. We feel that the affairs of this earth are judged with reference to another world. If under such circumstances we should find attitudes that are strange to us, we should not be surprised.

The two time-honored business precepts of the medieval church are that men should charge only a just price and that, if they loaned money, they should charge no usury and ask for no worldly reward. As a medieval concept, the doctrine of just price was older than the doctrine of no usury but probably did not receive so much theoretical exposition. Both of these church precepts were rigidities in business that came from the outside and both cut deeply into the fabric of human relations.

Just price was a fairly rigid concept from the fourth to the sixteenth century. The price of a commodity was to be just to the consumer in the long run. To be sure, the producer or trader was to be allowed to sell at a price that would return the cost of production and a moderate profit. On the surface, this application of the doctrine of just price appears to involve neither hardship nor rigidity. The hardship and the rigidity lurked, however, in the interpretation of the cost of production. The churchmen of the middle ages thought of the cost of the production of each article; that is, considered the cost to be inherent in the commodity. Of course, the businessmen could get along very well on cost plus moderate profit, until he suffered a loss. This loss, however, could not be made up on another commodity. The tendency, therefore, was to reduce profits on the average. This was unjust to the businessman. The whole doctrine offered justice, or perhaps we should say preferential treatment, to the consumer, not the producer. This involved a first-class rigidity or drag on business. Correction came only in

the sixteenth century when market price gained widespread acceptance both within the church and outside. Indeed, the great rise in prices during that century was to break down the whole underpinning of enforcement.

The second church doctrine was "no usury"; that is, no money was to be paid for the use of money. Obviously this rule would be a drag on businessmen, especially traveling merchants who were typically in need of cash with which to fit themselves out with a cargo of goods. If a traveling merchant had suffered a shipwreck, or if his last venture had been unprofitable, he might have little or no capital with which to embark upon another voyage. If he could not pay money for the use of the money which he might borrow, he obviously had little chance of getting a loan. This would have been serious; indeed, it would have dealt a death blow to the whole system if there had been no means of getting around the situation.

The rigidity of the doctrine of no usury was lessened by sundry means of circumvention. One was the well-known partnership device whereby the lender of the money agreed to receive a share of the profits instead of a fixed rate of return for his loan. This circumvention arose outside of the church, and churchmen themselves participated in it. Indeed, the church itself came to make important exceptions. The most important of these was the doctrine of interest. According to this subterfuge, the lender of money gave the loan without charge for a short period and then was allowed to make a charge for the failure to repay at the fictitious date. This is well known and needs no further elucidation. The church also came to allow usury when great risk was involved, as it certainly would be in the case of bottomry and respondentia loans. A further source of relief from the doctrine of no usury lay in the enforcement. No penalty was incurred by the borrower, only by the lender. Therefore, Jewish moneylenders were available for productive, as well as consumptive, loans.

In the case of storekeepers and shopkeepers, or, as we might say, retailers and small industrial masters, loans were obtained in the form of sales' credit. For instance, a London shoemaker in the late thirteenth century often purchased leather imported from Spain, on a credit arrangement of four quarterly payments.

Even if we made allowance for such exceptions or exemptions or circumventions, there was still a drag on business in the church doctrine of no usury. Just how much of a drag existed there is, of course, no means of determining.

A second source of rigidity in business is found in the laws of towns, states, and empires. On the occasion of emergencies, states and empires passed laws that fixed prices. These occasions and laws are matters of record and need not be recalled here. The extent to which business was curbed is easy to overemphasize because the laws were in the nature of emergency measures.

The English assize of bread and ale, the history of which is on record from the thirteenth to the nineteenth century, did not fix the prices of bread and ale absolutely, but only in relation to the price of the grain used. The importance of the law, then, lies in the limitation put upon the profits of bakers and brewers. To be sure, this was a rigidity which many bakers and brewers seemed to have felt involved great hardship.

A notable example of the regulation of wages is found in England from 1349 to the early nineteenth century. Economic historians have given much attention to the various national wage laws and their enforcement. Since the wages fixed were maximum wages rather than minimum, the employers, including businessmen, probably considered that they benefited from the situation. It is worth noting, however, that they found it necessary to pay wages higher than the legal maximum in order to get workmen. Accordingly, we can see an element of rigidity, a hurdle that had frequently to be jumped. We can pass lightly over the element of a restricted and rigid home market that the laws tended to create. No one thought of workmen and laborers as a very important potential market at a time when the middle-class and aristocratic consumers at home and abroad offered sufficient outlets for most goods.

Medieval towns helped create rigidities for businessmen. Here lies a field for special study, a study of both direct municipal regulation and control through guilds. One direct regulation that is very pertinent to our subject is the law of towns that certain goods, such as wine, corn, and provisions, when brought into a port or a market had to be exposed for sale to the public for a certain period. After that term, the goods might be sold to dealers. This hampered both the merchant who imported and the retailer who wished to buy the goods for his trade. It created a rigidity that must have been irksome to the businessmen concerned.

Let us leave to others the study of such rigidities imposed from the outside, so as to be able to consider the inside situation; namely, the policy and management of the medieval businessman. Here lies a new field for the researcher. The subject should be considered with reference to two business systems—petty capitalism and mercantile capitalism.

Petty capitalism is the earliest form of business. It is found alike in ancient and in medieval periods. It is the inner essence of town economy at its dawn. It is the regime of small units and narrow markets. It is the system of storekeepers and shopkeepers, pedlars and traveling merchants. It exhibits a high order of production technique and specialization of firms.

The policies of petty capitalists are worthy of special study because of the rigidity found in them. The first we may mention is a high quality of goods, a policy adhered to by shopkeeper and storekeeper, artisan and retailer. The emphasis on quality arose from the close relationship between these businessmen and their customers, both meeting frequently in the same

town. The second policy was keeping opportunity open for all: a boy entered a trade as an apprentice, later became a journeyman, and then reached the highest point attainable—that of a small master. The third policy was the equality of masters: any master who sought to get ahead of his fellows was frowned upon, even restrained by regulations. The net result of these policies was a condition of rigidity that shut off growth and expansion. In the case of pedlars, hucksters, and traveling merchants a similar result arose out of the circumstances of moving about the country. So long as adventure and business were mingled in such dangerous proportions, there was possible only a rigid condition of smallness.

In the management of petty capitalists we also see a rigidity that coincided with the rigidities arising out of policies. The petty capitalist was not only a small master, industrial or commercial, but he was also the foreman and chief workman. Accordingly, there was little chance for progress. While the small firm might itself be highly specialized, for instance, engaged in making brown bread or peddling onions, the persons within the firm were not specialized. The lack of individual specialization and differentiation is a source of business rigidity. The reason for this is that when the small master is engaged in labor he cannot plan or manage very successfully and especially cannot expand or make far-reaching improvements.

Besides the individual firm in the regime of petty capitalism there was the industry represented by the craft guild. It is true that the guild has received too much attention from economic historians and the firm too little. Still, the guild and the industry behind it deserve consideration at this point. Two industrial policies may be mentioned that are pertinent to the subject of rigidity in medieval business. One is the exclusion of outside or alien businessmen from the retail trade of the town. The other is the exclusion of one craft or trade from another's field; for instance, the cobblers must only repair not make shoes.

A lot of study might be directed toward the rigidities of petty capitalistic firms and their industries. We should find, however, none too much information on the subject of wages and prices for the purely petty capitalistic regime.

When we turn to mercantile capitalism, which lasted from about the thirteenth to the early nineteenth century, we find that the whole picture changes. The emphasis is no longer on rigidity but on flexibility. This change is notable and deserves close attention. But first let us consider briefly what the new system was.

The system of mercantile capitalism saw the beginning of big business and wider markets. It was created by the sedentary merchant whose whole career was in marked contrast to that of the traveling merchant of the system of petty capitalism. This sedentary merchant used his energy and talent not in travel but in careful administration of his business and control

of small masters, such as we noted when considering petty capitalism. The greatest of the sedentary merchants became merchant princes, such as the Medici of Florence and the Fuggers of Augsburg.

One of the notable achievements of the sedentary merchants was to make the craft guild over into a greater guild or livery company in which the big merchants dominated. Henceforth, the guild rules tended to put less emphasis on quality of goods and none on equality of guildsmen. The piece wages of subordinate handicraftsmen were often regulated downward. In such cases we find elements of rigidity and these should be freely admitted. Similarly, we find rigidity in the outlook of most sedentary merchants in so far as they thought primarily of foreign markets. To them there was little chance for expanding home markets: for instance, they would regulate wages downward without any thought that they would lose any customers; for, to them, the chief market was found in the middle and higher classes abroad, as we have already noted. This attitude was reflected in the doctrine and policy of the later national mercantilism.

The elasticity found within mercantile capitalism is more notable than the minor elements of rigidity just considered. The sedentary merchant had relatively little fixed capital and overhead. He had few employees. It is true that he owned ships or shares in ships, but in times of depression he could tie these up and leave the masters and sailors to look after themselves. It is true that he controlled many small industrial masters and many miners, fishermen, and lumbermen. These, however, could look after themselves when times were hard, for they commonly had a second source of sustenance in small homesteads and gardens. At any rate, they did look after themselves in a depression.

The sedentary merchant broke down the old-time regulation against going outside of the town for manufactured wares. Instead of employing the skilled small masters of his town, operating according to the spirit of the old craft-guild rules, he often turned to the less skilled handicraftsmen of the country who would charge less for their output and would manufacture less expensive goods for a market of lower tastes than his fellow townsmen possessed—often indeed for the use of colonists and colonial slaves. We may think harshly of the merchant for debasing standards of workmanship, but we must praise him for his flexible ideals in marketing.

The sedentary merchant, who was the nerve center or brain of mercantile capitalism, was almost as flexible in policy and management as any businessman could be. Perhaps this is why his system had the longest life of any system of business known to history. In war and depression he could lie low as soon as his ships came in. He had a wide choice of markets in which to buy and sell. He performed so many economic functions that he could easily curtail one and emphasize some others. If a long period of hard times seemed ahead, he could and did turn to commission agency

rather than remain a risk-taker. If in his country shipping seemed more profitable than trade, he had ships built for him and carried goods for others at home or abroad, except where prohibited from doing so. He acted alone or joined a regulated company somewhat at will. He shifted from the management of his own business to investment in joint-stock companies. So flexible was his concept of business that he regarded the single venture as the basis of trade. To be sure, this became a rigidity in the development of continuous enterprise under the great trading corporations. On the whole, we can say that the sedentary merchant formulated his policy in such a way as to avoid heavy commitments in any one place so that he might be able to turn quickly to the most profitable and safe enterprise open to him.

We have now observed that, while petty capitalism was rigid, mercantile capitalism was elastic. If we were to go on into the more modern period, we should probably find that the system following mercantile capitalism, namely, industrial capitalism, was quite rigid, and that the next system, financial capitalism, was elastic. Coming to the present time, we find that the current national capitalism promises to be rigid. If this is so, then there is an alternation in the history of business behavior that deserves special attention. It may be that a rigid system tends to beget one more elastic, and vice versa. At any rate, our look into the middle ages suggests this alternation. Possibly other speakers on this program will deal with the question of the later rhythm in this aspect of business history.

RIGIDITIES AFFECTING BUSINESS IN THE SIXTEENTH AND SEVENTEENTH CENTURIES

By VIOLET BARBOUR
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The sixteenth and seventeenth centuries in European history constitute a period of transition from medieval economic conditions to the more rapid and striking making-over of the eighteenth and nineteenth centuries. In business as in other fields of living medieval rigidities were breaking down and new ones were forming, but these latter were not to reach full effectiveness until the succeeding period.

The great basic changes which were transforming the economy of Europe in this time are so well known that they may be very summarily enumerated: first, the wider scope and greater volume and continuity of trade relationships; second, the ancient authority of the church challenged throughout Europe and from several northern countries finally expelled; third, the steep increase of the stock of precious metals on which European commercial exchanges turned, upsetting prices and providing new incitements to business enterprise; fourth, conspicuous technical progress evident alike in agriculture, mining, transport, and manufactures; finally, the assertion of the authority of the state in the economic as in the political sphere.

Of these changes the first four tended clearly towards the emancipation of business from restraints to which it had been subject in the middle ages, such as the limited or static market, with long-distance commercial intercourse passing through the bottleneck of the fairs; the dead hand of the church withholding great properties from exploitation; the insufficiency of specie, and the difficulty of concentrating capital for large undertakings; the small disposable surplus of goods produced by handicraftsmanship. Even the trend towards economic nationalism, though it imposed its own substantial curbs on business, offered some mitigations—though less than one might expect—of the particularism of guild and town.

But historic change is never abrupt, and even when circumstances have changed, ideas, attitudes, and institutions which belong to the past are discovered enjoying a prolonged afterglow. In this early modern period outmoded ideas, like those of just price and the sinfulness of usury, had left their marks in laws and ordinances against regrating, and in those which fixed a maximum rate of interest. The prejudice against brokers and middlemen was still finding its way into law in the seventeenth century. The idea that the purpose of industry was to supply a livelihood to the artisans concerned in it, lingered on in the principle that the more hands employed in a manufacture, the better. With a nagging persistence guilds continued to enforce apprenticeship and antiquated restrictions on employment and

enterprise. Towns still adhered to narrow exclusive policies towards craftsmen from other towns or other lands. And town and state vied in prescribing to the consumer what he should eat, wear, and be buried in. All these, to be sure, were crumbling rigidities, which the dynamic forces of the age might drive through or work around.

In the merchant capitalist's adjustment to the new vastness of the world of trade, there is a curious rigidity of outlook. From the preceding period, when markets were relatively static, he inherited the concept of a fixed, inelastic volume of trade. This assumed that the domestic market could not be expanded, and that foreign markets were to be captured, not developed—an assumption which helped to embitter the rivalries of international trade, and to justify predatory methods in that field.

Just what results ensued to business from the religious struggles by which Europe was riven in this period is a subject on which historical controversy rages. It is clear that the liquidation of the property of the church, where it occurred, broke up a rigid, conservative landlordism in favor of a more elastic capitalistic exploitation of those resources. The abolition of saints' days and the condemnation of mendicancy in Protestant countries helped to create a workaday world favorable to business enterprise. Religious wars and persecution, by impelling many thousands of merchants, moneyed men, and artisans to settle in foreign lands, made an inestimable contribution to the advancement and versalitility of business in several countries through the dissemination of techniques and business experience and their adaptation to new environments and opportunities. The rise of competitive industry owed much to this transplanting and assimilation; finance and commerce scarcely less. It is possible that political and social discriminations applied to religious minorities—to Jews very generally, to Huguenots in France, and to dissenters in England—had the effect of channeling their energies and ambitions into business enterprise, an inviting field left open to them. How curiously religious rigidities were carried over into business is illustrated by the marked tendency in these same religious minorities to confine business relations to coreligionists.

When one examines the merchant's world in this period, it is evident that business was carried on in the face of constant risks, of which so-called "acts of God" constituted a minor, and acts of kings, governments, and officialdom generally, a major part, these latter ranging from petty extortion by petty officials to confiscation of the merchant's goods, the loss of his liberty, or even his life. One way to minimize these risks was by keeping one's business small and well in hand. Colbert used often to deplore the cautious conservatism of French traders, absorbed in their *petites affaires*. For a more ambitious program a certain amount of elasticity was secured by a careful distribution of risks. Even the great merchants of this period made a point of having a variety of irons in the fire. This was to forego

the advantages of specialization and continuity, but one could hope for a balance of good fortune over ill.

A condition rigid in itself which encouraged versatility in the conduct of business was the seasonal nature of trade. This was true not only of commerce in such commodities as grain, wine, and fish, but of trades conditioned by natural factors affecting navigation, particularly wind and ice. In addition, several highly important branches of commerce were carried on seasonally by means of great fleets which sailed and returned together, denuding markets of certain kinds of commodities on their departures, and flooding them with certain others on their returns. Convoy set up rigidities of a similar kind. Even land travel and transport were largely seasonal because of the condition of roads in winter. In the middle ages the fairs had played a famous role as centers for seasonal interchanges of commodities. They were still numerous and frequented in the seventeenth century, but the greater volume of European trade either sought its markets directly, or else had recourse to such great all-the-year-round emporia as Antwerp was in the sixteenth century and Amsterdam in the seventeenth.

A grave handicap to an enterprising merchant, and one which must have made for business rigidity, was the difficulty of securing immediate and reliable information on such vital matters as rates of exchange, prices, and market conditions. However, this age was impressed, not by the difficulties of communication, but by the vast improvement in the speed, frequency, and certainty of intercourse, notably in the development of postal services, which enabled merchants to manage their foreign business by correspondence with factors or commissioners in other countries. The lists of current prices published first in Antwerp, later in Amsterdam, and possibly in other trading cities, were unquestionably a great help to foreign as to local merchants. Newspapers devoted to trade began to appear only in the late seventeenth century. There were plenty of itineraries and almanacs which indicated roads, provided tables of distances between towns, information about fairs and markets, and other useful data; plenty of manuals, also, to instruct the trader about coins, weights and measures, contraband regulations, tariff rates, and the forms of bills of exchange, with much besides.

When one studies the organization of trade in this period, one finds the facts dividing and marching off in opposite directions. The individual merchant trading for himself, the self-made merchant entering upon trade without benefit of apprenticeship, the interloper who traded as he pleased—all are frequently encountered. So is the private partnership, though its history and fortunes elude the historian. Oldest, most common, and most elastic of all trading associations is the family, whether its members traded in partnership on a common stock or severally in loose co-operation. I have

already mentioned the tie of a common religion as it was honored among businessmen.

The decay of certain fairly rigid and often expensive organizations, such as the old confraternities and associations on the pattern of the English regulated companies, and of courts and factories of merchants living together in extraterritorial isolation in foreign lands, encourages the supposition that such costly and repressive organization—now that the privileges which once accompanied it were being withdrawn—was felt to be burdensome. The increase of independent trading is attested—as it is furthered—by the growth of brokerage and commission business, and of such marketing facilities as the exchanges (bourses) in the more important centers of trade. The expansion of credit and the standardization of the form and handling of remittances by bills of exchange tended in the same direction.

The status and rights of merchants trading abroad were in process of definition through commercial treaties, and though insecurity was still the rule, there were positive protections in the recognized principles of law merchant and in the institution of courts merchant in many trading cities on the continent.

In opposition to the forces which encouraged a free, elastic conduct of business, there were others which worked towards a tighter, more rigid set of conditions. Of these latter one may notice the increasing intrusiveness of the state in business, and the increasing domination of capitalism.

The rigidities imposed on business by the complex of policies known as mercantilism are familiar to historians and economists. Many of these policies originated as devices to check more or less extensive foreign penetration. As such, they had the general support of native merchants and industrialists, though specific policies and the burdensome machinery of regulation and enforcement might be condemned. In countries in which foreign competition was not seriously felt, as in the United Provinces, mercantilism was actively resisted by businessmen, especially by merchants and capitalists. In France the economic nationalism associated with the name of Colbert became so doctrinaire and inflexible as to provoke a reaction towards freedom among businessmen at the close of the seventeenth century. In England mercantilism in this period was more piecemeal in formulation and more flexible in operation than it was to become later. When seriously inconvenienced, merchants resorted to smuggling, bribery of officials, or some other form of evasion. Sometimes governments cooperated in this evasion through licences or through dispensations or suspensions of the measures objected to. Dutch merchants who were less nationalistic than their rivals in other lands, often got themselves naturalized in the countries to which they traded, in order to obtain the privileges

of natives. But for the expansion of trade to include other continents and the rise of colonial markets, the rigidities implicit in mercantilism would have been more sharply felt.

Because business in this period learned to look to the state for protection, privileges, and opportunities of many kinds, it gave in return financial support to the state, and at last became inextricably committed to the maintenance of the public credit, a rigidity from which it was never again to be free. On the other hand, in the more commercial countries, business had a voice in the formulation of economic policies.

Small independent business was now finding itself caught between the upper millstone of the state and the nether millstone of capitalist enterprise. The pressure of the latter was felt in various ways. If the rise of the metropolitan market offered opportunities with one hand, it took away trading freedom and the autonomy of the local market with the other. Provincial business became slowly conscious of its servitude to the concentrations of wealth and trading power in Amsterdam and London. It was provincial resentment that put up the stoutest fight against trading monopolies in the two leading commercial countries in the seventeenth century, and was able to set limits to the partitioning of world trade among groups of metropolitan capitalists.

But though chartered monopoly was checked in England and the Netherlands, unchartered monopoly was vigorous in these as in other countries. Sometimes it was represented by rings of wealthy merchants "understanding one another" as Sir George Downing put it; sometimes by middlemen's associations, as the factors of Blackwell Hall or the Woodmongers' Company of London or the Mercers' Corps of Paris; sometimes by cartels such as appeared in German mining and metallurgical industries in the sixteenth century; in the seventeenth century by emissaries of Dutch capitalism who bought up French wines in advance of the vintage; and by those speculators who cornered supplies of certain commodities on the Amsterdam Exchange. Combinations of employers frequently dominated guild or company organization. Even where there was no incorporation, one finds in certain urban industries a disposition of employers to combine in a common employment and wage policy. This disposition was not seldom reinforced by the solidarity—in some instances the identity—of the employers with the municipal government.

In the larger enterprises of the period, the role of capital becomes increasingly passive: that of creditor, rather than participant. It finances the great trading companies, but gradually withdraws from trade. It builds and equips ships, but does not necessarily own or operate them. It buys and sells commodities, not to trade in them, but for speculative profits. Insurance, which used to be an avocation of merchandising, retires from that association. The practice of paying dividends in commodities is de-

clining. There is a free movement of capital from one country to another. The solution of the problem of financing joint-stock companies by making the capital permanent, but enabling the investor freely to sell or transfer his shares, is in line with these developments.

This mobile and elastic capitalism owed much to the rise of metropolitan money markets in conjunction with commodity markets. Towards the end of the sixteenth century Amsterdam succeeded Antwerp in this capacity and began to draw capital for investment from many parts of Europe. This attractive power was much enhanced by the founding of the Bank of Amsterdam in 1609, for the stabilization of exchange and for security of deposit. The ease with which credit could be transferred on its books was a sensible alleviation to the drags on business involved in the liquidation of transactions in cash and to the insecurity of the merchant's strongbox. The example of this bank stimulated the expansion of public and private banking in other countries, and the circulation of banknotes, checks, and other forms of paper credit.

But if finance is more mobile and flexible than ever before, the structures which it helps to build in commerce and industry by their very size, or their complexity or specialization, take on rigidities in the forms of fixed assets of plant and equipment, of numerous trained personnels, and of accumulated stocks of raw materials and finished commodities. The rise of the joint-stock company, while it indicated that business had raised its capacity to finance large-scale enterprises, did not necessarily mean more flexible organization of the enterprises themselves. Some of the joint-stock companies were in fact extremely clumsy in organization.

Although industrial production was still generally organized under the domestic system which, as Mr. Gras has pointed out, retained a considerable degree of flexibility especially when operating in rural areas, the workshop appeared more frequently than in the late middle ages. Certain industries were of necessity shop industries, requiring extensive equipment and storage facilities. Metallurgical industries are in this class, as well as printing, glassmaking, sugarbaking, etc. There were also many textile workshops, organized to draw together the processes dispersed among the crafts, to speed and standardize production, to reserve a supply of skilled labor against competition from other employers, and sometimes to guard technical secrets. These advantages were partly offset by such rigidities as the heavy investment in fixed assets, the current overhead, and the difficulty of providing employment throughout the year.

The period of the sixteenth and seventeenth centuries was one of elastic price movements, partly because of the strong though uneven impact of American silver on European prices, partly because of changes in transport facilities and the rise of competitive industries breaking their way into hitherto self-contained price areas. Manufacturers engaged in these competi-

tive industries possessed surprisingly exact information about prices of raw materials, wage rates, and retail prices prevailing in other countries. Amsterdam prices and Dutch freights supplied an element of firmness which was felt throughout Europe and even in other continents, stabilizing rather than rigid.

Though the general movement of prices was steeply upward from the middle of the sixteenth to the middle of the seventeenth century and more quietly upward in the second half of the seventeenth, some commodity prices were going down, the market being better supplied or partly taken over by other commodities. Thus sugar, tobacco, spices, and dyestuffs became cheaper, but supplies of tea, coffee, and chocolate appear not to have kept up with demand in the late seventeenth century. Wool was cheaper in England because of the embargo on export, and dearer, for medium-fine grades, in France and the Netherlands. Cloth prices were affected by the vogue of stuffs, mohairs, silks, calicoes, and fine linens, but also by international competition in this industry. The substitution of coal for wood in certain industrial processes in England, tended, as Mr. Nef has shown, to cheapen production.

Certain rigid factors intervened in the movement of prices: governmental restraints on export or import; pressures on dealers and retailers not to handle foreign goods, as in France under Colbert; tolls, tariffs, excises, and staple rights; prohibitions of certain machines or techniques; and attempts to fix wages. A heavy burden of regulation on any industry necessarily affected the prices of commodities produced. Monopolistic efforts to force up prices of easily engrossed commodities occurred not infrequently, and were in some cases countered by the opening up of new sources of supply. Local efforts to fix prices were generally unsuccessful, except in the case of foodstuffs sold in controlled urban markets. State governments were able to influence prices, especially through export and import regulations, but efforts to fix them usually failed. On the whole, prices were competitive.

That wages lagged behind prices, though with a general upward trend during this period, is the general assumption of historians, but more detailed work needs to be done on this subject before we can speak with certainty. It is quite possible that in some occupation—that of seamen, for instance—wages kept pace with prices. As in the case of prices, there is much cross reference from country to country concerning wage rates in competitive industries, from which we gather that money wages were highest in Holland, followed by those in England, France, and the Scandinavian countries, in the order named. The discrepancy between real wages in Holland and in England was probably not far from reversing the relation of the two countries as to money wages. For in Holland taxes bore heavily on the poor man. The restriction of industry to the towns was a factor in the high figure of rents. The omnicompetence of the city fathers in fixing

wages and the facts that Dutch industries were based on imported raw materials and competed with products of cheaper labor in other lands, contributed all the elements necessary to extreme rigidity. Something was gained, especially in the textile industries, by the introduction of labor-saving machinery, and by ingenious processes which improved the quality or appearance of goods without increasing costs; also by the organization of workshops to effect economies. But these adaptations did not prevent the depression of wages in Leyden, and perhaps in other industrial towns, to a point which reduced skilled craftsmen to pauperism. Indeed, Dutch towns did not hesitate to employ pauper, delinquent, and child labor as a means of reducing labor costs, with grave results not merely to the standard of living of artisans but to domestic purchasing power and the adjustment of tax burdens. It is not surprising that under these circumstances we have combinations of employers to enforce the wage scale on the one hand and strikes and labor agitation on the other. The emigration of Dutch entrepreneurs and craftsmen to other lands was a common form of escape from the pressure of these conditions.

In England it is evident that the regulation of wages under the Statute of Apprentices was insufficient to maintain the rigidity envisaged in the face of the general rise in prices and a lively though sporadic demand for skilled labor. Since it was possible for industry to escape from the monopolistic and regulatory policy of corporate towns, there was a more flexible movement of wages in response to prices, labor supply, and market conditions than in the Netherlands. What effect the rigidity involved in the Act of Settlement had upon the labor market, and so upon wages, cannot be exactly known. Its greatest effect was probably in immobilizing a considerable part of the available supply of unskilled labor. The combination of husbandry with craftsmanship widely practiced in England must have provided an element of flexibility in the craftsman's dependence on his employer. Perhaps this explains the fact, so often complained of in seventeenth-century England, that the poor would not work.

In conclusion, one may venture the generalization that the greatly enlarged orbit of trade made for flexibility in business, but that inherited outlook, vested interests, and the trends towards economic nationalism and towards a capitalistic domination of trade and industry, set up counter-rigidities. The greater size of commercial and industrial undertakings in this period made for complexities of organization, and so for rigidity. Since the production of goods is usually a more bulky business than finance, transport, or marketing, it is natural that industry should have taken on more rigidities than other business activities.

THE GROWTH OF RIGIDITY IN BUSINESS DURING THE EIGHTEENTH CENTURY

By EARL J. HAMILTON
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Although the revolutionary changes in economics, politics, religion, and science magnified the problem of business rigidity in most countries of the Western World, attention will be focused upon England, where the economic changes were the greatest and the economic history is the best. Series of commodity prices are the only available statistics either extensive or reliable enough to warrant an attempt to measure quantitatively the trend of rigidity. Even these data will not disclose minute gradation, but changes in the first and second halves of the century can be roughly compared. Owing to the scarcity of information, the trends of the chief factors, such as guild regulations, navigation acts, settlement restrictions, industrial concentration, and mercantilism, presumably making for rigidity will be discussed upon an a priori basis. Little verification of how each force actually worked is possible; hence a considerable margin of error vitiates most of my conclusions. Can one be positive that the decline of the craft guilds, for example, increased the flexibility of business—that an enlightened guild might not have been more, rather than less, adaptive to change than were independent craftsmen?

The discovery by Hutcheson, Hume, and Smith of the benevolent deity which harmonized egoism and altruism, individual and social interests, the development of the social compact by Locke and Rousseau, and recognition of the infallible natural order by the physiocrats—all these, together with the ineptitude, incompetence, and favoritism of the irresponsible ruling cliques, enthroned laissez faire in social thought. But a wide chasm separated theory from practice. Adam Smith speaks of mercantilism as "the modern system" that "is best understood in our own country and in our own times."[1] Long awaited and enthusiastically received by intellectuals and a few enlightened statesmen at home and abroad, the *Wealth of Nations* was not without immediate influence; but, as Professor Cunningham pointed out, it was years before its full influence on English commercial policy was felt.[2] More than eight years elapsed before a member of Parliament appealed to Smith's authority in a debate and more than eleven before he was quoted by a member who had read his work or was sympathetic towards his ideas.[3] It was not until 1797 that Pulteney declared that Smith would persuade his own generation and govern the next, and this was a prediction rather than an impression of accomplished fact.

[1] *Wealth of Nations* (Cannan ed.; London, 1904), I, 395; II, 125. Cf. F. L. Nussbaum, *A History of the Economic Institutions of Modern Europe* (New York, 1933), 233.
[2] *Growth of English Industry and Commerce* (London, 1903 ed.), II, 597.
[3] John Rae, *Life of Adam Smith* (London, 1895), 289-290.

The English craft guilds, which had already lost much of their control over manufactures before the close of the seventeenth century,[4] declined gradually in the first half of the eighteenth and rapidly in the second half. The guilds remained important in some localities and industries throughout the eighteenth century and were not legally extinguished until the Municipal Reform Bill of 1834 threw open merchandising and the handicrafts in all boroughs; but by 1750 they had largely lost their authority to compel membership and to search the premises and inspect the wares of guildsmen. Boroughs were often unwilling to sustain monopolies against outsiders, and in some instances men might even choose membership from among several guilds in order to practice a given trade.[5] But Miss Kramer[6] and Professor Heaton[7] have shown that as the guilds declined many of their supervisory functions were superseded by regulatory acts of national or local government and by the surveillance of producers' associations such as the Worsted Committee formed in 1775.

By 1751, as shown by the report of a Parliamentary committee appointed "to inquire into trade and manufactures," sentiment had reacted notably against the Elizabethan Statute of Apprentices. Nonenforcement and piecemeal legislation had sapped its strength.[8] But "at the beginning of the nineteenth century the apprenticeship system . . . was still a living reality,"[9] and the Statute was not repealed until 1814 and then not without a struggle. Throughout the eighteenth century indictments were brought in many places against those who took up a trade to which they had not been apprenticed.[10] In 1756 the hammermen's guild of Glasgow barred James Watt from exercising his craft as a mathematical instrument maker in the city because he had not served an apprenticeship in their organization in spite of the fact that a year earlier he had failed to find a single man in Glasgow capable of teaching him his craft. When Parliament failed, in 1793, to prohibit the introduction of Cartwright's wool-combing machinery, "the only relief which was given to the wool combers was that of relaxing 5 Elizabeth c. 4 in their favour, and allowing them to apply themselves to any trade in any part of the kingdom without new apprenticeship."[11] Eden[12] denied Adam Smith's contention that many large incorporated towns excluded workers who had not served an apprenticeship, but apparently localities that nullified the Statute of Apprentices enjoyed a competitive

[4] G. N. Clark, *Science and Social Welfare in the Age of Newton* (Oxford, 1937), 102-104.
[5] Stella Kramer, *The English Craft Guilds* (New York, 1927), 139-142, 161-175, 180, 186; W. Cunningham, *op. cit.*, II, 203, 206, 310-311; E. Lipson, *Economic History of England* (London, 1931), III, 235.
[6] *Op. cit.*, 139-142, 181.
[7] *Yorkshire Woollen and Worsted Industries* (Oxford, 1920), 405, 414-420, 423, 434-435.
[8] Stella Kramer, *op. cit.*, 175; E. Lipson, *op. cit.*, III, 290-291.
[9] W. Cunningham, *op. cit.*, II, 43, 659-660.
[10] E. Lipson, *op. cit.*, III, 290-291.
[11] W. Cunningham, *op. cit.*, II, 652.
[12] *State of the Poor* (London, 1779), I, 436-437.

advantage as late as 1779. In that year the remarkable economic development of Leeds, Manchester, and Liverpool was attributed to its nonenforcement and to the absence of settlement restrictions.[13] Textile workers, crushed by the new machinery, made an effort to revive the legal assessment of wages near the close of the eighteenth century, but assessments were then a mere legal curiosity. Outside Yorkshire they had little vitality after the Restoration.[14]

The Law of Settlement, which permitted the forcible removal to his home parish of anyone occupying a house of less than 10 pounds annual rental who might become a public charge, may have been haphazardly enforced; but there is strong reason to believe that from the date of its enactment, in 1662, to its relaxation, in 1795 (by the provision that a worker might not be returned to his original parish without actually having become a public charge), the mobility of labor even into country districts was materially impeded. To quote Lipson:

> A petition presented to Parliament on behalf of the iron-master, Wilkinson, reflects the difficulties to which the settlement laws gave rise: it asked that his men "might be deemed extra-parochial in order to avoid their removal to their respective settlements."[15]

To promote flexibility in the adjustment of the supply of labor to the demand for it, Adam Smith made the following proposal:

> Let the same natural liberty of exercising what species of industry they please, be restored to all his majesty's subjects, in the same manner as to soldiers and seamen; that is, break down the exclusive privileges of corporations, and repeal the statute of apprenticeship, both [of] which are real encroachments upon natural liberty, and add to these the repeal of the law of settlements, so that a poor workman, when thrown out of employment either in one trade or in one place, may seek for it in another trade or in another place, without the fear either of a persecution or of a removal, and neither the public nor the individuals will suffer much more from the occasional disbanding [of] some particular classes of manufacturers, than from that of soldiers.[16]

It seems safe to conclude, however, that no matter how large the impediments to the mobility of labor imposed by the guilds, the Statute of Apprentices, and the Law of Settlement may have loomed in 1776 they were less formidable than at the beginning or even at the middle of the century. The guilds declined throughout the century, and the Statute of Apprentices was gradually undermined by legislation and local nullification. With the spirit of natural liberty in the intellectual air, it became increasingly difficult to enforce the Law of Settlement and other legislation shackling labor. At the same time the displacement of peasants by the rapid course of enclosures and the agricultural revolution, the growth of population, the competitive efficiency of the new machinery, the redistribution of industry to exploit new resources under the stimulus of invention, and a catastrophic decline in the rate of real wages combined to increase the responsiveness of labor to economic change. Forces powerful enough to compel labor to submit to the hated factory discipline were not lacking

[13] E. Lipson, *op. cit.*, III, 292.
[14] W. Cunningham, *op. cit.*, II, 43.
[15] E. Lipson, *op. cit.*, III, 467.
[16] *Wealth of Nations*, I, 435.

at the close of the century, when the textile and metallurgical inventions gave rise to large-scale enterprise.

Early in the eighteenth century there was a surprisingly lusty impulse toward unionism in mining and in the textile and metallurgical industries. As early as 1726 the organization of woolen workers was important enough to evoke an Act of Parliament "to prevent unlawful combinations of workmen employed in the woolen manufacture," and by 1738 there were complaints of frequent rebellions among the organized nail-makers. The last four decades of the eighteenth century witnessed the rise of friendly societies in the textile industries and frequent strikes and other trouble from organized labor in mining and the metal trades.[17] But the introduction of machine technique weakened the tendency for skilled handicraftsmen to organize, which became manifest before the beginning of the Industrial Revolution. As Bowden points out:

> The peculiar significance of the age of machinery in relation to the organization of the working classes is to be found in the fact that it introduced conditions favorable for organization among practically all groups of workers, skilled and unskilled alike. The obstacles in the way, and in particular the increasing rigor of hostile laws, prevented these inherently favorable conditions from giving rise to effective organizations openly avowing trade-union purposes among either the older handicraftsmen or the new types of industrial workers, till long after the close of the eighteenth century.[18]

Apparently nascent trade unionism imposed no serious obstacles to the responsiveness of labor to economic change.

The movement of goods within England was not hampered by the internal customs barriers and outright prohibitions against domestic shipments of certain articles which obstructed trade on the continent; and there was no important merchant guild in England during the eighteenth century. Under the Georges the opposition to monopoly on the part of the English public was too great to permit the chartering of new companies with exclusive privileges, but for one reason or another the existing concerns such as the East India Company, the African Company, and the Hudson's Bay Company retained their monopolies.[19] Adam Smith believed that trade with America had been and was worth more to Europe than that with the East Indies despite the denser and more civilized population and, therefore, the greater potentialities of trade with the Orient. For in all countries the East India trade was confined to companies with exclusive privileges; whereas the trade from each mother country to her American colonies was free to every citizen on equal terms.[20] The voluminous literature denouncing the great privileged companies for exploiting the producers of their exports and the consumers of their imports tends to confirm their indict-

[17] Paul Mantoux, *La Révolution Industrielle* (Paris, 1906), 60-61; T. S. Ashton, *Iron and Steel in the Industrial Revolution* (Manchester, 1924), 205-206; Adam Smith, *op. cit.*, I, 69; E. Lipson, *op. cit.*, III, 391-409; H. Heaton, *op. cit.*, 432.

[18] Witt Bowden, *Industrial Society in England towards the Close of the Eighteenth Century* (New York, 1925), 294-295.

[19] David Hannay, *The Great Chartered Companies* (London, 1926), 238, 242-245.

[20] *Wealth of Nations*, I, 414-415.

ment by Smith for restraining trade, but we lack clear evidence as to whether the monopolistic restrictions of the privileged companies increased or decreased during our period.

Combinations of capitalists, which presumably increased in number and strength (as the scale of operations expanded, the importance of capital rose, and the concentration of industry progressed) with the advance of the century, may have been a significant factor in business rigidity. Says Adam Smith:

> We rarely hear of the combinations of masters, though frequently of those of workmen. But whoever imagines, upon this account, that masters rarely combine, is as ignorant of the world as of the subject. Masters are always and everywhere in a sort of tacit, but constant and uniform combination, not to raise the wages of labour above their actual rate. To violate this combination is everywhere a most unpopular action, and a sort of reproach to a master among his neighbors and equals. We seldom, indeed, hear of this combination, because it is the usual, and one may say, the natural state of things which nobody ever hears of.[21]

Owing to common law prohibitions, the hostility of public opinion, and the ease of maintaining secrecy, we have little information concerning actual combinations in restraint of trade. Adam Smith said he knew "undertakers of some particular works" who had strong enough hold upon the supply of their goods to justify the payment of bounties upon exports out of their own pockets. "This expedient succeeded so well, that it more than doubled the price of their goods in the home market."[22] Unfortunately, he gives no hint as to the identity of these combinations.

A number of statutes to clarify the Navigation Acts were passed, and they were occasionally suspended after 1783; but they were not repealed until 1849, and no legislation or orders in council between 1663 and Huskisson's reforms in 1822-23 fundamentally altered their protection to English shipping. To secure revenue, procure valuable materials for shipbuilding and for manufactures, and to injure France (a mercantilist rival), England greatly extended the list of enumerated articles during the eighteenth century. Even in 1764 many goods were added, and enumeration was extended to the northern colonies hitherto exempt.[23]

The prohibition of the importation of live cattle, except from Ireland, continued in force to the close of the century; and foreign grain was excluded from English markets in normal years until 1845. Almost a decade of agitation by the Anti-Corn Law League (led by Cobden and Bright, two of the ablest propagandists England has ever produced), the social unrest following the severe and protracted depression of 1837-43, and the Irish potato famine (Wellington's "rotten potatoes") were required to extinguish the corn laws. The woolen and silk industries were protected by outright prohibitions against imports, and many industries were sheltered by prohibitive duties. In restraining exports for the benefit of domestic manufactures English mercantilism was at its worst. The exportation

[21] *Ibid.*, I, 68-69. [22] *Ibid.*, II, 19.

[23] Lawrence A. Harper, *The English Navigation Laws* (New York, 1939), 398-399.

of tools or machinery used in the cotton, woolen, linen, or silk manufactures and the emigration of artisans to teach their trades were forbidden under heavy penalties. It was no accident that the first textile machinery operated in this country crossed the Atlantic in Samuel Slater's head. Exports of hides, horns, wool, woolen yarn, unmanufactured brass, watchcases, fuller's clay, and a host of other articles were prohibited; and many other raw materials were retained through prohibitive export duties. In an effort to prevent wool exports, domestic shipments were obstructed by absurd regulations; and the stringency of the law was increased as late as 1787. Not until 1825 did England abandon the legislative effort to keep her industrial inventions at home.

Pitt's so-called "free trade" treaty with France, negotiated in 1786, significantly reduced the customs barriers and promoted trade between the two countries, but this single breach in the protective system was closed by the French Revolution after three years' trial.

In the second half of the century free trade, in the strict sense of the term, was insistently demanded by economists[24] and steadfastly resisted by governments. Laissez faire doctrines removed few legal obstacles to trade, but the laissez faire outlook in intellectual and enlightened political circles doubtless rendered enforcement of the restrictive system less effective. A consequent increase in the violations and evasions of mercantilist trade regulations, territorial expansion of the market for English goods, and an extension of the area from which raw materials were drawn probably tended to decrease the rigidity of business; but little, if any, flexibility can be traced to legal adoption of free trade.

Under capitalism perhaps the best single objective test of business rigidity is the frequency of price changes over a period of time. Eighteenth-century price data are not complete or reliable enough to register minute gradations; but the series recently compiled by Sir William Beveridge from purchases by the Lord Steward's and Lord Chamberlain's Department,[25] apparently the most extensive statistics available for England in our period, show unmistakably that prices changed far more frequently in the second than in the first half of the century. The annual prices of the sixty-six articles quoted with sufficient frequency to warrant consideration averaged 9.2 changes in 1701-50 and 15.9, or nearly twice as many, in 1751-1800. But as a measure of adaptability to economic change this ratio is distorted by the relative stability of commodity price indices in the first half of the century and the revolutionary upheaval of the second half. As might be expected, agricultural prices changed more frequently than industrial prices. Agricultural commodities averaged 13.0 and 26.3 changes in the first and

[24] In 1776 Condillac (*Le Commerce et le Gouvernement* [Amsterdam], Part II, 41-180) took a much more uncompromising stand against governmental intervention in business than did Smith.

[25] *Prices and Wages in England from the Twelfth to the Nineteenth Century* (London, 1939), I, loose tables in rear cover.

second halves of the century respectively and industrial products 7.6 and 9.9. The prices of the six textile articles for which trustworthy quotations are available averaged 5.9 changes in 1701-50, only two thirds as many as the general series, and 6.0 in 1751-1800, or only 38 per cent of the general average. The relative frequency of change in 1751-1800 largely reflected the neutralization of the sharply upward tendency of commodity prices accompanying monetary and credit expansion by the downward pressure exerted by sweeping technological advances in the textile industries. That concentration of production in larger units was not entirely responsible for the relative stability of textile prices in 1751-1800 is suggested by the fact that the annual price of coal, the supply of which, as Dr. Sweezy[26] has shown, was controlled by combinations of varying success and duration in the first half of the century and by a rigid combination after 1771, changed 64 times in the eighteenth century. Of Beveridge's sixty-six articles, only oats, beans, hay, and straw registered more frequent price changes. Despite the phenomenal increase in consumption and of the concurrent "limitation of the vend" in 1771-1800 the rise of coal prices lagged behind the increase of commodity prices in general. Spice quotations, which in view of the monopoly of the East India Company were "administered prices," changed a third more frequently in 1701-50 and slightly more often in 1751-1800 than the general average.

In general the rates of money wages listed by Mrs. Gilboy in her *Wages in Eighteenth Century England*[27] show a greater frequency and amplitude of movement in 1751-90 (when her series end) than in 1701-50.

The belief, surprisingly widespread among scholars, that the remarkable economic development of Spain in the eighteenth century reflected the adoption of liberal principles has little foundation in fact. As Philip V triumphed during the War of the Spanish Succession he did sweep away some of the customs barriers separating the different kingdoms into which the country was divided; and in 1755 trade with the Hispanic colonies of the New World was thrown open to non-Castilians. But the Bourbon dynasty grafted onto the thorough-going Spanish mercantilism of the sixteenth and seventeenth centuries a mercantile system deliberately patterned after that of Colbert.[28] Genuinely protective duties and systematic regimentation of industry were adopted. One may search Spanish economic literature in vain for important traces of physiocratic influences. The *Wealth of Nations*, which had appeared in Italian by 1780, was not translated into Spanish until 1792. After being withheld by "the In-

[26] *Monopoly and Competition in the English Coal Trade, 1550-1850* (Cambridge, Mass., 1938), 32-40, 144-145. Cf. T. S. Ashton and J. Sykes, *The Coal Industry of the Eighteenth Century* (Manchester, 1929), 211-214.

[27] Cambridge, Mass., 1934.

[28] Earl J. Hamilton, "Spanish Mercantilism before 1700," *Facts and Factors in Economic History* (Cambridge, Mass., 1932), 214-239; and "The Mercantilism of Gerónimo de Uztáriz: a Re-examination," *Economics, Sociology, and the Modern World* (Cambridge, Mass., 1935), 111-129.

quisition on account of the 'lowness of its style and the looseness of its morals,' " it finally appeared in 1794.[29] But it had little direct influence either in the eighteenth century or subsequently. Only to a limited extent and for a brief period, under the late Republic, has liberalism ever found *lebensraum* in Spain.

Schmoller's selection of the policies of Frederick the Great, in 1740-86, to illustrate mercantilism[30] attests the absence of laissez faire in Prussia. Apparently the first important liberal reforms in Germany did not occur until the first decade of the past century.

In France control over industry by the craft guilds actually increased. They became progressively exclusive in their principles and drastic in their regulations. Their legal position was undermined by the substitution of state enforcement for autonomous execution of their ordinances, but the vast army of bureaucrats charged with industrial supervision was disastrously thorough in the performance of its duties. Although nature favored the mercantilists through a succession of bad harvests, the swift collapse of the Turgot ministry under the weight of opposition to his suppression of the guilds and removal of the restrictions on the grain trade shows that France was unwilling to accept the freedom of trade so eloquently championed by her economic and political theorists. The moderate protectionism resulting from the treaty of 1786 with England and a similar convention with Russia was swept away by the French Revolution.

To summarize, prices became more flexible, the guilds declined, the mobility of labor increased, and the triumph of laissez faire doctrines obstructed the enforcement of industrial regulations and weakened impediments to external commerce. All these tended to reduce the rigidity of business. However, the extent of the advance in flexibility is commonly exaggerated; for the essential elements of the mercantile system survived.

Undoubtedly there is interaction between economic theory and economic practice, but the experience of the eighteenth century tends to confirm von Hayek's view that the economic thought of each generation does not affect practice until the next. It would be a great mistake to assume that natural liberty dethroned mercantilism in practice before the ink dried on the *Wealth of Nations*. Adam Smith entertained no such hopes. One cannot find in the original or the subsequent editions of his work recognition of substantial liberal advances in his own or any other country. Far from arguing for what there already was, Smith believed that he was crusading for what there was not and never would be! In the shadow of the "divine hand" metaphor he tells us that "to expect, indeed, that the freedom of trade should ever be entirely restored in Great Britain, is as absurd as to expect that an Oceana or Utopia should ever be established in it."[31]

[29] John Rae, *op. cit.*, 360.
[30] *Essay on the Mercantile System* (London, 1902).
[31] *Wealth of Nations*, I, 435.

RIGIDITY IN BUSINESS SINCE THE INDUSTRIAL REVOLUTION

By Herbert Heaton
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Professor Gras has described rigidity as "a condition or circumstance found in a man, a group of men, or an institution which operates as a drag on business," as "a factor which often impedes the attainment of an objective in business," or as "something that impels business in a certain direction, up or down." The dictionary defines rigidity as stiffness, unadaptability, uncompromisingness, a state or quality of being stiff, not flexible, not to be bent, firm, not to be moved. I find it hard to interpret the limitations of the definition; it seems to stretch to the horizon; it includes the personal shortcomings and stubbornness of the businessman; it embraces all the restraints imposed by government and by the nature of the capitalist system in general as well as by the peculiarities of the particular business in which the businessman is engaged; culture patterns and culture traits are involved; and surely it should also include the rigorous operation of the economic laws of marginal cost, productivity, and utility, of diminishing returns, of competition—pure or impure—which the businessman cannot know unless he neglects his business and devotes his waking hours to reading the publications of the Cambridge school of economists. In short, rigidity seems to mean that the businessman can exercise his free will—even the will to be rigid—only in a world dominated by a greater or less degree of politics and predestination.

It is somewhat difficult to decide the period covered by the phrase "since the Industrial Revolution." Some of us contend that this revolution began to prepare to revolt in the sixteenth century and only finished the job, even in Britain, well after the middle of the nineteenth century. I assume that my assignment covers roughly the nineteenth century and as much of the twentieth as is capable of inspection.

In comparison with earlier centuries, this period was the very antithesis of rigidity. It was the age of liberation, laissez faire, free enterprise, free trade, free movement, free labor, and free land. Religion had become largely a Sabbath exercise, and in North America the railroad service on Sunday did not differ much from that on weekdays. Religion was religion, politics was politics, and business was business, and while the first two carried on an endless dialogue, the parson was welcomed only if he did not interrupt the flow of reason. Politics spent much of its time destroying old forms of feudal, urban, guild, or state control before it began seriously to build new ones. It abolished what was left of serfdom, wiped out the remnants of guild restraints, reduced tariffs, repealed navigation laws, dismantled the old colonial systems, abandoned the regulation of

wages, prices, interest rates, and quality of goods, removed the ban on the emigration of skilled artisans or the export of machines, and ended such surviving monopolies as that of the East India Company. While it thus removed most of the hindrances to the free use of land, labor, and capital, it usually helped wherever it was asked to do so by sufficiently powerful or energetic interests. It gave bounties or tariff aid to infant industries; it encouraged or undertook the construction of the new transportation facilities. It simplified and reduced the cost of floating joint-stock companies, and granted the privilege of limited liability on fairly easy terms. It liberalized the laws of banking and of bankruptcy. In general its guiding policy was a composite of "help, don't hinder; *caveat emptor;* and blessed be competition." To preserve competition it might encourage the building of a second railroad in an area already served by one; or it might pass antitrust laws and enforce them by fits and starts. Only when and where this guiding policy proved inapplicable or produced unsatisfactory results was the state likely to pursue an interventionist policy. But the advocates of intervention had to establish an overwhelmingly convincing case before the state would act. It was easy to do that in the matter of labor regulation of young or female factory workers, but beyond that rather exceptional and limited step the state was slow to move. We have to get near to 1900 or even pass to this side of it before governments began to feel the urge to save everybody from everybody else.

While the nineteenth century gave legal freedom to enterprise, it also gave it a vastly greater measure of physical freedom. The doubling of the world's population in about a hundred years, the improvements in methods of production and transportation, the expansion of old industries and the birth of new ones, the emigration of fifty million Europeans, the chance to export capital or goods to the new world, the settling of possibly ten million square miles of that world, the rise of capital goods industries, the ramifications of banking, and the growth of service industries and of professions—all these gave an unprecedented stimulus to every kind of endeavor. There had been nothing like it in the whole earlier history of mankind, and there probably will never again be anything like it. In that hundred years peace from Waterloo to the first World War men knew not Armageddon; they had lost the chance or the desire to fight infidels; they had only to fight nature and each other in the fields of economics and politics.

In such a dynamic age rigidity seems out of place or doomed to the attention of the devil and the bankruptcy court. One thinks of the undertaker, alias the entrepreneur of whom we talk so much, moving about with the ease of a globule of mercury on a highly polished sheet of glass. Yet if the external aspects of rigidity—those imposed by state or church—decline in importance until nearly the end of the century, some internal

ones remain, new ones develop, and some of them grow to large dimensions, with disastrous, or at least harassing, consequences. The very pace at which enterprise moves makes the risks of destruction greater; the pattern of the roller coster—a dozen cyclical fluctuations and four secular trends—is bad for all too many passengers; and the fickleness with which customers' tastes pass from swings to roundabouts to swings, from canals or turnpikes to railroads to automobiles, from candles to kerosene to gas to electric light, from brass to iron to steel, from horse buses to streetcars to buses or private cars—all make the dangers and the cost of rigidity dangerously high.

Of these dangers I feel competent to speak about only one or two of the more important or novel. The first, and probably the most important and new, was the quantity of fixed capital needed for the new equipment of manufacturing and transportation. Until at least the middle of the century the cost of industrial buildings, power generators, machinery, blast furnaces, brick kilns, etc., was small. A plant could be built up from small beginnings by the natural processes of expansion and by ploughing back profits. Generally the manufacturer provided his own equipment, and his fixed cost was therefore the rent of the premises.

By 1815 at latest British cotton manufacturers were well aware of the burden they had shouldered. In a meeting at Glasgow in January of that year they signed a petition for the removal of the import duty on cotton, and in that document they described the rigid costs which were cursing their efforts. The duty itself amounted to 25 or 30 per cent of the first cost of coarse cotton. More important still, "of the capital invested in this branch of trade, not less than 10 million pounds have been sunk in the erection of buildings and machinery, which are inconvertible to any other purpose, and which, in the event of a failure of the manufacture, must be irretrievably lost."

The estimate of 10 million pounds may be exaggerated, but the plea of inconvertibility was sound, so far as it referred to the machinery. Much of the capital had been supplied by merchants, who had been accustomed to keeping their funds in liquid or at least in viscous form, trading in goods, acting as commission agents, going into shipping, swinging from the domestic to the colonial market, and in general showing remarkable versatility. To sink funds in bricks, waterwheels, jennies, mules, and water frames was like abandoning carefree philandering in favor of marriage without prospect of divorce. This transformation, or reformation, frightened many merchants into immobility; they stuck to their old methods of obtaining supplies by putting out raw materials to domestic workers or by purchasing goods in public markets from small producers. But in face of the competition of factory products, they were driven to cut the wages of domestic workers or the prices paid for homemade goods to starvation

rates, and to accept such reduced profits for themselves that they were eventually largely driven from the field. Only the merchant who turned manufacturer had much hope of surviving from the old order to the new; and many merchants who had spare capital sank it in productive equipment, becoming merchant-manufacturers.

Much of the fixed capital of early nineteenth century industrialism was supplied and built up by men who were primarily manufacturers. I have examined the financial records of some of these men and doubt very much whether they worried much about the value of their fixed capital or about the need for earning the prevailing rate of interest on it, unless it had in part been borrowed or invested by a sleeping partner who insisted on receiving his regular 5 or 6 per cent. At the birth of a partnership—and most firms were partnerships of kinsfolk or friends—the total capital interest of each member was recorded in the deed and in the stock book. At the end of each year when stock was taken, interest was added to each partner's capital sum, as was also his share of profit, if there was any. From the total of original capital plus interest plus profit was deducted any money drawn out by the partner during the year, and the balance was his capital stock for the next year. But all this had nothing to do with additions to buildings or plant; these were paid for out of current income and were regarded as water gone over the dam. If much was spent on extensions or improvements in any one year, the partners were slow in drawing out their interest or profits for a while; but that was apparently regarded as merely sound business policy, "abstinence" as the dismal scientists were calling it.

The really overpowering rigidities of the early industrialists were the heavy taxes of the Napoleonic war, the laws which in England forbade the establishment of joint-stock banks, and, above all, the obligation to pay one's bills on time, hoping that one's debtors would do the same thing. That last piece of rigidity was all too often *rigor mortis,* and bankruptcy usually came from an overdose of overdue debts rather than from any crushing burden of fixed capital costs.

At other points the early nineteenth century undertaker revealed various degrees of rigidity. If he was stolid and had been prosperous, he clung to patterns and styles far too long; he relied on old forms of marketing and was convinced that quality would bring buyers back to him after they had been tricked by shady rivals. If he was enterprising he tried novelties in style, price, and quality, especially when seeking to lift himself out of a depression; he experimented with new forms of buying and selling, and became a manufacturer-merchant instead of using the old commercial outlets. A large part of the English cloth which came to the United States between 1800 and 1830 was made by manufacturers whose brothers or sons had come to live in New York, Philadelphia, or Boston.

These "damned Yorkshiremen," as Niles called them, constituted a vigorous colony of *emigrés,* filling many boarding houses in Park Place. Some of them developed the shipping of cotton from New York to Liverpool, thus making returns in goods rather than in bills or drafts. One of them founded the first line of transatlantic packet ships which did so much to put New York ahead of its two rivals. There was little rigidity in such men; like Jurgen, they were willing to try everything once, even to beating the New York customs officers; and elasticity in a world rigidly bound to cyclical fluctuations sent some of them into bankruptcy sooner or later.

Rigidity in fixed capital burdens does not seriously influence manufacturing till we get to the great iron and steel, chemical, coal, and light and power plants of the second half of the century. But by that time, the largest home of fixed capital outlay had been built. I mean the turnpikes, the canals, and, greatest of all, the railroads. Land and inland waterway transportation have been the greediest of fixed capital consumers; it has been estimated that it cost 100 billion dollars—two and a half times the federal debt—to equip the world with railroads. But the *method* of financing the transport systems was even more important for our subject than the amount of capital involved. The British turnpikes were financed by selling bonds. The privately constructed canals raised some of their capital by selling stock, but the amount of money thus raised was never enough to finish the job. Various emergency financial expedients had therefore to be adopted, including the sale of preferred (or even cumulative preferred) stock, and the borrowing of money on mortgage, bond, or promissory note.

The railroads could rarely do better than this, and in some respects they did worse. By 1849 the British railroads had raised 230 million pounds of capital. Of this, 69 per cent was ordinary stock, 9 per cent was preferred stock, and 22 per cent was made up of loans, which we may lump together as bonds. During the next nine years, as Professor Evans has shown, the capitalization jumped 37 per cent, or 85 million pounds. But of that increase, only 20 millions was in common stock; the balance was in preferred stock and bonds. Hence by 1857 common stock accounted for only 57 per cent of the capital outlay, preferreds for 18, and bonds for 25. This trend toward bonded indebtedness continued, and in 1913, 37 per cent of the 1,300 millions capital sum of the British railroads consisted of bonds or of some form of guaranteed stock.

If the British railroad director was accused of foolish financing, he could retort, "Look at the United States and at the state-owned railroads," and while you were looking he might slip away. Certainly the North American situation was proportionately far more burdened with the rigid obligation to pay interest, for three fifths of the United States railroad capital was in bonds, the Canadian situation in the early twentieth century was probably worse, and the state-owned railroads were built almost en-

tirely with borrowed money. Our own nemesis is too well known (or is being too successfully stalled off) to be discussed here; but the Canadian transportation system—waterways and railroads alike—is perhaps the world's best example of the impasse into which nineteenth century transportation needs, business policies, and financial methods can steer a country.

So far we have looked at rigidity in only one place. But fixed capital costs are not the only aspect of rigidity in modern business. Rigidity may characterize the supply of working capital, banking practices, transportation charges, marketing costs, the wages bill, the amount paid in executive salaries, taxes, licenses, and government levies in general. As an alternative to these rigidities in costs, there may be rigidities in price, imposed by government regulation, by the fear of foreign competition, by agreement among rivals, by poly-, oli-, duo-, or monopolies, by custom or inertia, by purchasers' resistance, by the deep-rooted habit of thinking in terms of five or ten cents, or by the lack of a coin worth half a cent. I wish someone would write a thesis on the relation between the price level in different countries and the value of their units of small change. There are rigidities in business policies which make a firm unable, unwilling, or hesitant to embark on new products, diversify or specialize, expand or contract, merge, integrate, or even change the chain over which it broadcasts. Finally there are rigidities in the businessman's ideas concerning himself in relation to the community and in the community's ideas concerning its relation to him. The attitude of different sections of society toward labor unions, bankers, chain stores, group banking, Wall Street, and tenant farming, all create an *idée fixe* which makes realistic reorganization and changes in policy difficult or at least slow.

On these many aspects, which may be found singly or in combination, there is time to make only a few comments. In the first place the importance of some of them has probably been exaggerated. For instance, the influence of labor organizations in raising or maintaining wages has almost certainly been given too great importance in nineteenth century history. As Mr. Rostow has shown, the maintenance of British wages during the seventies and eighties, in a period of heavily falling prices and of widespread complaints about the Great Depression, was not due to the power of organized labor, for trade union membership languished during those decades. And Australian experience during the last twenty years has shown that refrigerators which seem to freeze wages to the standard of living can defrost to the extent of reducing wages in times of falling prices and also—to mix my metaphors—can pare them still further to take account of an absence of prosperity.

In the second place, rigidity is inherent and inevitable in the nature of many of our modern enterprises, and there is not much we can do about it. This is true of the industry dominated by small units, such as

agriculture, and of the largest ones, such as chemicals and the public utilities. Agriculture has been ignored in this session, yet it has probably developed more rigidities during the last hundred years than any other form of activity. Its growing commercialization and tendency to specialization, its dependence on more costly equipment, the increasing values of land in the new world, and the growing weight of transportation costs and taxation, have all made it more rigid, especially in terms of costs and specialization. There may be no alternative to this; but we might consider whether it would not be wise to abandon our glorification of the ideal of land ownership by the cultivator and be a little more charitable toward the idea of well-regulated tenancy. At least the landlord would then share with the farmer the risks of rigid costs in a time of falling prices, and if the experience of other lands was repeated, he would serve as a cushion, by being forced to absorb, in the form of reduced rents, some of the loss in land values. At the other end of the list, large-scale organization seems inevitable, and flexibility is less appropriate in a *Queen Mary* than in a submarine chaser. Some are born rigid, some achieve rigidity, and some have rigidity thrust upon them.

My third comment is on the relationship between rigidities and the business cycle as well as the secular trend. In prosperous times and in an upward trend, rigidities in organization, policy, and costs do not matter much; they look like causes of prosperity. But when the curves—long-term or short-term—are descending, old rigidities may lead to disaster, while at the same time new ones may develop. The crises of 1825 and 1837, coming in a downward secular trend of prices, played havoc with the whole structure of mercantile capitalism, including its banking activities; at the same time they led to regulation of note issues and stimulated early labor organization. The higher price levels and easy profits of the years 1849-73 stimulated vast expansion of fixed investments in agriculture, railroads, and foreign loans, and created an atmosphere favorable to free trade and intensified competition. But the uneasy, unprofitable decades from 1873-96 shook competitive industrial capitalism badly, as well as the agricultural organization and practices of western Europe; hence those who had invested heavily, specialized minutely, or become set in their business policies during the previous period were in difficulties, and there was a general search for devices which would reduce costs or raise prices. It was in this period that business and the state began to formulate those policies which have characterized the twentieth century—associations to control prices or output, cartels, trusts, integrations, control by investment bankers, tariff protection, railroad regulation, subsidies, colonial preference, and so forth. The beginnings of "the end of laissez faire" can be traced to that period. But the full development of these public and private

policies had to wait till the next downward secular trend which began in the twenties and the collapse of the thirties.

That brings me to my last comment, which is a question that only time can answer. Is there a general inherent rigidity in modern capitalism, or in the modern forms of capitalism, which impels it in a certain unchangeable direction to destruction or at least to drastic transformation. Marx was sure there was; and Sombart was equally sure, two decades ago, that modern capitalism had passed through infancy, youth, and exuberant manhood to middle age, and was approaching senility. He saw its hair graying, and its teeth falling out. Perhaps today he would say that its hair has turned gray overnight from the shocks of the last ten years and that its teeth have been knocked out in a concentration camp. It is certain that the rigidities created by the system itself during the last fifty years, plus those imposed by a depressed world, by an ideology-bound world, by a world preparing for war, and by a world which believes that political means can work economic miracles, have produced an economic order which is far remote from the classic capitalism of the Victorian age. It is equally certain that the forces which drove and dominated that classic age seem to be spent.

DISCUSSION

In opening the discussion, RUDOLF A. CLEMEN spoke briefly in place of Professor Max Handman whose untimely death had occurred two or three days previously.

Dr. Clemen expressed the hope that Professor Gras would elaborate the theoretical part of his paper and publish such a statement in one of the journals at an early date. Regarding Professor Gras's reference to the just price rigidity of the middle ages, Dr. Clemen wondered whether in actual fact the just price was as rigid as we sometimes thought it had been and whether it did not differ very greatly in its effects in various countries. The point was made that the medieval fairs were probably places where business did not suffer from rigidities as much as elsewhere.

Regarding the sixteenth and seventeenth centuries, it was suggested that the so-called "mercantilism" was not quite as definite and rigid as Professor Barbour wrote. Reference was made to Dr. F. K. Mann's volume on *Marschal Vauban* and its criticism of the mercantile systems. Rigidities differed very greatly under these systems, being much greater in France and Germany than in the Netherlands and Italy.

Commenting on a statement that Colbert had complained that the French merchants and manufacturers were too conservative, it was suggested that perhaps Colbert, himself, with his narrow, regimenting ideas and policies had had a good deal to do with making merchants more conservative and careful as a practical operating matter.

Preparing for Dr. Tucker's comments, Dr. Clemen brought together the various types of rigidity already mentioned in the papers as follows: (1) rigidities coming from outside, e.g., from the state and from other agencies such as cartels, etc.; (2) rigidities coming from within the structure of business due to the weakness inherent in large-scale industry (some of these rigidities being due to technological processes themselves, and others due to rigidities in administration of large-scale enterprise) and rigidities due to overhead costs and to administrative prices; (3) another classification of rigidities would be that of desirable and undesirable ones concerning which there would be differences of opinion; (4) rigidities growing out of procedures in regulation or control from outside industry such as production regulation and distribution regulation (some of the procedures affecting them being taxation, tariffs, the patent system, regulation of monopoly, and regulation of resale price maintenance).

Dr. Clemen pointed out that if you have rigidity in one field, it is likely to go over into another field and there is no end. The real problem today is how to stop rigidities. Should we have more detailed government control? No, because for one thing business decisions made by government are more and more removed from the business firing line, making for more rigidity.

It was suggested that the TNEC testimony points the way. Members of the Committee such as Senator O'Mahoney, as Chairman, want to try to preserve freedom from rigidity. It may be possible to develop a policy toward business that will be flexible as to government regulation of it. For example, regarding declining industries or weak financial industries such as railroads, regulation

now in effect may well continue to be fairly complete; but regarding new industries, e.g., aviation and others yet to be developed, there is hope that there may be less regulation and rigidity from outside, as there is less internal rigidity. In new industries there is a safety valve for American initiative. There is ground for the talent of new generations. There can be a renewal of the spirit of the old entrepreneurs. Senator O'Mahoney and Assistant Attorney-General Thurman Arnold hail from a country where this spirit exists and acts. Less governmental rigidities for new industries will help to create and provide a new frontier for our active, restless, ingenious people, industrially free from rigidities. This we need.

RUFUS S. TUCKER: There is nothing in the principal papers to which I could take exception. It seems to me, however, that they have failed to discuss the most important kind of rigidity, perhaps because it is sociological rather than economic in nature. I refer to rigidity of the social structure, meaning especially the ease or difficulty with which individuals can shift occupations and rise from the lower income classes to the higher. Although this rigidity is sociological it has economic consequences and depends to some extent on economic causes. If such rigidity exists it is obvious that the national income will be lessened by it because it prevents the proper distribution of tasks according to skills and discourages the introduction of new methods. Class rigidity will also be greater or less according to the amount of capital and training required to enter various occupations and the ease of obtaining that capital or training. Certainly it is easier to obtain training now than it used to be. More capital is now required to set up an independent business, but perhaps it is no harder to obtain capital now than formerly because of the higher average income of the people now and the facilities for operating with the capital of others.

One manifestation of social and class rigidity is rigidity in the distribution of income. More could be done in studying this than has been done. The available figures, even for recent years, have not been analyzed enough to show what proportion of wealthy families started life in poverty or how long wealthy families retain their wealth.

Another kind of rigidity that has been overemphasized and much misunderstood is rigidity of prices. There have always been some prices that changed frequently and others that changed rarely. There have always been some that fell greatly in depressions and others that did not fall so far. The explanation of these differences lies in the nature of marketing and in the nature of costs of production. It is clear that the growth of large-scale enterprises is not the explanation of price rigidity since they have always existed and are no more common in industries dominated by large enterprises than in others. They are more common among manufactured products than among agricultural products and other raw materials. Probably they are more attributable to rigidity in wage rates than to any other factor. Whether wage rates have become more or less rigid in the course of the centuries is not certain. It would be helpful if economic historians devoted more attention to this point. One thing, however, is known: in the middle ages and earlier modern periods, laws with respect to wages were generally intended to keep them down. Nowadays laws with respect to wages are generally

ECONOMICS OF WAR

INFLUENCES OF PREPAREDNESS ON WESTERN EUROPEAN ECONOMIC LIFE

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My topic is the influence of preparedness upon economic life before the outbreak of the present war in the European countries west of the border of old czarist Russia and the Balkans. Since I restrict myself to the effects of preparedness, I shall not discuss the significance of economic measures induced by the outbreak of war itself but only of those instigated by the threat of war.

The influences of preparedness upon economic life as shown in Europe were and are so pervasive as to permit us to speak of a "preparedness economy." This term is literally the same as the German term *Wehrwirtschaft* which came into general use in 1935 when rearmament became the leading impulse in German economic life. A preparedness economy is transitional in a double sense: in the narrow sense it marks the gearing of what was a peace economy to the threat of war; in the wide sense, it marks the transformation of traditional capitalism into a system whose fundamental relations are not yet clearly delineated. The widely discussed inherent tendencies of latter-day capitalism are developed, strengthened, and effectively enhanced by preparedness measures. These measures not only alter parts of the system, however, but tend to create new vital institutions within the economic body.

War economy, new style today, is no longer superimposed upon a peace economy, as it was in the World War, but takes its roots in preparedness economy. After the last war, it was possible to eliminate quickly most of the so-called "emergency" war measures, because they were grafted upon a functioning economic system. After this war, specific war measures may be eliminated, but many signs portend that the very structural nexus of preparedness economics in which these war measures took root cannot be abolished in most European countries as a long-term phenomenon for the following two reasons: First, the whole economic system has undergone with the impetus of preparedness such cataclysmic changes that the traditional methods can no longer cope with the new problems brought in their wake. Second, with no lasting basis for European peace in evidence, preparedness is bound to continue to set the stage for economic life.

The sweep and scope of this development spring from the fact that all contemporary war between major powers is "total" war; i.e., it involves the entire population regardless of age and sex. Preparedness is no longer restricted mainly to the fighting forces and their needs, military and eco-

nomic, but also has to provide for and protect the emotional and cultural as well as the material needs of the civilian population.

Hence "preparedness economy" is an economic system which has already been changed or which is on its way to being transformed by the preparations for a total war. These changes may be dated in Germany from 1935 on, when armament expenses jumped from less than 400 million dollars to 2½ billions; in England from 1937 on, when the principle of financing by taxation was abondoned; and in France from 1938 with the rise of the Daladier government.

All three countries reached an advanced stage of preparedness some time before the outbreak of the war: Germany in 1938 when she allocated close to half of her national income to war purposes; France, when the emergency decree of March 20, 1939, was passed; and in 1939 England, the last of the great European countries to subordinate all economic activities to preparedness. She revised her preparedness expenses for 1939-40 three times before the outbreak of the war, from less than 3 billion dollars to more than 3½ billion dollars—a sum nearly six times as much as allocated five years previously for similar purposes.

We may distinguish in Europe two types of preparedness economy: the "democratic" and the "totalitarian." The democratic type is marked initially by separate, seemingly unconnected measures in the nineteenth century tradition somewhat modified by the experiences of the World War. The guiding principle of this stage of democratic preparedness economy is to offer minimum disturbances to private enterprise and to political institutions, at the same time blueprinting plans for a centralized war economy. The totalitarian preparedness economy starts with the recognition that the traditional methods of "business as usual" are inadequate and that it is necessary to introduce all types of innovations short of the abnegation of the principle of private property. The rapidly intensifying danger of war, however, forces the democratic states to adopt methods which are in material effect identical with those of the totalitarian states, whatever the ideological differences purport to be.

This process is not to be laid at the door of a single individual, group of individuals, or a national character. It is inherent in the postwar world and in the rise of industrialized warfare. A world of "haves" and "have-nots" creates aggressor nations willing to utilize all available weapons to change their "have-not" status. The per capita equipment of a contemporary army and its destructive capacity are of such scope and dimensions that they imply "total" war. Total war, however, can only be met with total preparedness.

I

What has total preparedness meant throughout the range of European economic life at very recent years? This may conveniently be discussed in

terms of the changes in the status of government, capital, labor, middle classes, international trade, and finally the cumulative effect of all these changes upon the structure of the original economic systems.

Government. Government as the power agency is present in all the specifically economic spheres we shall discuss, but it is useful to understand its changing functional status in general and not only in its specific performances in, for instance, labor relations and international trade. This changing status of government occurs in all preparedness countries.

The fundamental change here is that from the traditional liberal restriction upon state intervention in economic life to complete control over that life by the state. One major symptom is the enormous role of the government in the redistribution of national income and in the allocation of national savings. In October, 1938, a high German official admitted that two thirds of the German national income was redistributed by the government. A few weeks later (on November 12), the general report submitted by the French Prime Minister to the President of the Republic stated that the French public expenditure for 1939 was budgeted to the amount of 137 billion francs. According to the same report, the French "national income was estimated on the most optimistic calculation at 250 billions." Thus, in 1938, the French public authorities laid plans to spend an amount equal to about 55 per cent of the national income. Of course, neither were these amounts in their entirety for preparedness, nor is the intrusion of government in economics a process initiated by preparedness. But the very fact that the government could assume such a surpassing influence in the control over national income is directly ascribable to preparedness.

Capital. As government becomes an economic Leviathan, individual private capital step by step loses its traditional rights. Recent publications on the German development have emphasized the vampire character of the national socialist economy. It is reiterated that the German capitalist must seek permission for any new investment and plant replacement, that he is frequently compelled to invest where commanded, and that he is pressed into compulsory cartels to facilitate further government regulation. Prices and profits are stringently controlled: the supply of raw materials and labor in any given industry or enterprise is subordinated to national necessity as regards all industries and enterprises. Foreign trade is similarly shackled.

In the late stages of preparedness, this more and more became the position in which French and English entrepreneurs found themselves. The emergency decree of March 20, 1939, brought into the open in France this immanent tendency. The decree stipulated that the preparedness sector of the French economy was to be subordinated to the Ministry of National Defense. This ministry is responsible for the central regulation of

the rate of productive expansion, for the provision for priority of governmental orders over private orders, for the storage and delivery of all raw materials, etc. The first preparedness laws promulgated in August, 1936, by the Popular Front government, were restricted to armament industries in the narrower sense of the term. This new decree strikes all important sections of French economy. In addition to armament industries, all private enterprises receiving substantial orders for the army, navy, and air forces, and, moreover all enterprises which may be listed as vital for defense by the Ministry of Labor or the Prefectures, are considered as belonging to the preparedness sector. Ten days after the promulgation of the decree, an executive order stated that all the iron and metallurgical industries were *ipso facto* part of the preparedness sector, and many other economic activities were brought under government control.

In England, the creation of a Ministry of Supply with powers similar to the French Ministry of National Defense and the German Four Year Plan Authority was first advocated in 1938, but it was only in June, 1939, that such a ministry was established, and that with very limited powers. For the causes of this hesitancy I quote from the book of E. V. Francis, *Britain's Economic Strategy:*

> The Government was instinctively against interfering with industry as long as the machinery worked without too much friction. Planning economic mobilisation in advance of actual war involved such a break with tradition, such an infringement of private enterprise and even a limitation of departmental powers that the line of least resistance was taken. Each problem therefore was tackled piecemeal.

It is now evident that with the outbreak of the war this policy of "muddling through," inadequate as it was before, had to come to an end, and as *The Economist* of October 28, 1939, tells us: "The Ministry [of Supply] will become the biggest and the most comprehensive trading organization in the world."

Labor. Parallel to the loss of traditional rights by capital goes the tendency to subordinate the traditional rights of labor to the requirements of preparedness. There exists an important time lag in this development between the totalitarian and the democratic states. In the totalitarian states, this process was completed with the establishment of the one-party system: the right to enter freely or to leave employment, the right of collective bargaining, and the right to strike have been completely eliminated. Labor unions are either annihilated or transformed into government organs. In the democratic states, when the necessities of preparedness conflict with the rights of labor, there is no doubt that labor must give way. Up to the outbreak of war, the essential rights of labor were not severely curtailed in England and France. In France, however, under the pressure of preparedness, most of the social legislation of Popular Front days was revoked.

There is another aspect of the status of labor under preparedness—that relating to the standard of living. Preparedness necessarily concentrates

the national economy upon armaments in the broad sense. Production of consumers goods is subordinated to production of armaments and producers goods. All available resources are tapped, including labor, with a double consequence: individual wages, as well as the total purchasing power of the working class, rise, due to increasing employment. Left unchecked, a conflict arises between growing purchasing power for consumers goods and their stationary or reduced rate of production. Since a substantial expansion in production of consumers goods is incompatible with preparedness, the only way to avoid a most undesirable inflationary process is through strict control of wages and commodity prices and through heavy taxation. This necessarily demands under an advanced preparedness economy that longer hours be accompanied by a stationary or reduced standard of living.

In considering the status of labor under preparedness, one must add that there is a gradual absorption of unemployment.

The Middle Classes. The farmers, in so far as minimum prices are guaranteed and expansion of production is encouraged for most agricultural products, are for a time favorably affected by preparedness measures. In the advanced preparedness stage, however, the situation of the German farmers deteriorated as a result of the scarcity of farm hands and the disproportion between the fixed price level for their agricultural products and the rising price level of industrial products.

In industry and trade, the small enterprises suffer more under governmental measures than big business, since their survival is so much less important to the success of preparedness. The situation is well summarized in the carefully chosen words of the *Frankfurter Zeitung* (*Handelsblatt*, November 26, 1939) written after the outbreak of the war, but referring to conditions precedent:

> . . . . the survival of the independent entrepreneur, regardless of the size of his enterprise, has become an important goal of the national socialist economic policy. But despite the theoretical recognition, the practical difficulties arising for the small and middle enterprises—in war economy no less than previously—raise the question of how far these difficulties can be avoided. A tendency toward increasing concentration is essential for war economy and, I may add, for a preparedness economy as well. The compulsion of placing and executing all orders most efficiently, of saving raw materials, productive capacity and labor, necessitates the elimination of all less efficient enterprises. . . .

The experiences of the Ministry of Supply in England, as reported in *The Economist,* point in the same direction:

> So far the Minister has relied upon existing trade associations as far as possible, and where no trade association has existed, the Control has been created from the resources of the largest firms. The British Iron and Steel Federation, for example, has in effect become the Iron and Steel Control; the leaders of the timber trade have become the Timber Control, etc. These transformations have some immediate convenience, for the trade associations already have machinery in existence for doing many of the things that the Control does, and this policy does insure that the Control is expertly advised on technical matters. But there are very real dangers of abuse, for those in control may well be faced by awkward problems of divided loyalty.

The compulsory elimination of many middle-class German businessmen may be explained by the specific German situation of shortage of workers, shrinkage of middlemen's profit, and inadequate supply of raw materials. By February, 1939, more than 100,000 out of 600,000 one-man handicraft shops were closed by the government, notwithstanding the assurances in the national socialist program that the golden age was on hand for the middle class.

International Trade. The liberal conception of the international division of labor was irreparably damaged by the World War. The history of the spread of protectionism and the vain attempt to restore pre-World War conditions need not be retold here. The distortion of the classical economic conception of international trade has been enhanced by preparedness. Preparedness demands some form of self-sufficiency of every European nation in times of war. This and the regard for potential allies, vassals, or enemies introduce elements totally alien to the original concept of buying cheapest in the best markets. The regulation of international exchange has given added impetus to this entire tendency. The strangling of foreign investments is a consequence of preparedness needs and fears engendered by a general state of tension, as is the migration of "hot" money.

The Structure of the Economic System. Thus far we have discussed consequences of preparedness measures on various segments of European economics. Many problems touched on here, or not mentioned for reasons of time, require extensive analysis. But we pause here for a consideration of the qualitative changes wrought in the economic system by preparedness measures in an advanced stage. This stage was not reached in all western European countries at the outbreak of this war, but it is my opinion that all major western European countries were on the way to it.

No essential feature of traditional capitalism has been left untouched. The free capitalist entrepreneur becomes a governmental functionary; the profit motive, the engine of the capitalist system, has to a large degree been supplanted by governmental regimentation; private property is maintained in principle but has lost much of its economic power, its place having been virtually filled by the state. The roles have been reversed. Traditional capitalism proclaimed to the state, "Stay out of business!" In an advanced preparedness economy, the state proclaims to private owners, "Give up your control of business." Free competition, and its agent, free prices, become obsolescent nationally and internationally.

Since the aim of preparedness must be the diversion of national production into "state luxuries," resulting in a scarcity of consumers goods, prices for consumers goods would go sky high under conditions of a free market. This would undo the entire preparedness program. To obviate this, the free price mechanism had to be discarded and replaced by direct and indirect price control.

Only one of the institutional devices of traditional capitalism fulfills its aboriginal role more adequately than ever. I refer to money and credit. They were considered by classical economists as a mere medium of exchange, as a vehicle for moving goods and services. Their behavior as autonomous forces by diverting or interrupting the circulation of goods was considered a usurpation of economic purpose. The extent to which they are today manipulated by governments, totalitarian and democratic, may not comply with the classical concept of economic automatism, but it does comply with the classical concept of their true function.

These characteristics, supposedly inherent in an advanced preparedness economy, are actually inherent in traditional capitalism at a certain stage of its development, and have hastily been matured in the hot-house of preparedness for total war.

This leads me to a summary consideration of the larger implications of preparedness economy in western Europe. They may be broken into three headings: first, the influence of preparedness upon full employment and the business cycle; second, the rise of economic planning; third, the rise of state capitalism, accompanied by the decline of the old ruling groups and the ascendency of bureaucracy. Obviously, I cannot go into detail concerning any of these, but merely offer a point of departure for discussing them.

II

Full Employment and Business Cycle. It is paradoxical that in Europe full employment has only been attained for a sustained period in our time under the pressure of preparedness. We all agree that full employment based on an adequate standard of living is the crucial problem for economic theory and practice today. It is attained under preparedness at the sacrifice of an adequate standard of living and by building up an economic structure hardly workable for other purposes than preparedness on an ever increasing scale.

There is another aspect of this. One of the roots of business cycles is the impossibility of sustaining continuous expansion of production of producers goods under contemporary economic conditions. Much more than in the United States, European economics is menaced by stagnation and even contraction. As long as unused productive resources are available, preparedness measures have an effect similar to public works programs advocated by the Keynes school to overcome depression. Not only would full employment cease as soon as preparedness or other public expenditures were kept stationary or were reduced, but the longer preparedness efforts continue, the greater will the disproportion between the sphere of producers goods and armaments on the one side and the sphere of consumers goods on the other side grow, thus setting the stage for depression of unheard-of dimensions.

Rise of Economic Planning. Such a situation cannot be handled with the traditional market system, but only by government acting in terms of a comprehensive plan. But long before such industrial demobilization plans arise, centralized planning has become the order of the day. The experience of all European countries with preparedness shows clearly its inextricable link with centralized governmental plans. Total preparedness makes planning inescapable. In an article complaining of Britain's failure to plan with full efficiency and stressing the necessity "to work out a fully articulated but unified plan," *The Economist* for July 15, 1939, stated:

> The job to be done is to apply all the resources of Britain, industrial, commercial, financial, organizational and intellectual to the many-sided but single object of national defence. It is a re-orientation of society itself that is needed, temporary but fundamental; and the trouble is that too much of the preparedness is still improvised and piecemeal.

Leaving aside the wishful thinking concerning the temporary character of such necessities, this statement clearly expresses the simple, inexorable fact that co-ordination of all economic efforts towards one goal is impossible under modern conditions without, to repeat from *The Economist,* "a fully articulated but unified plan."

State Capitalism and the Rise of Bureaucracy. Under advanced preparedness, government not only controls all important branches of production and distribution, but more and more assumes the role of the most powerful capitalist. I may mention the enormous share of public investment in the total amount of capital investment. In addition not only have the German government and the National Socialist Party acquired ownership of private enterprises, but in the last two years the English and French governments also have become direct owners or partners in vast industrial and commercial undertakings. An economic system may be called state capitalism where the principle of private ownership of capital is maintained but where the state gradually is becoming or has become the most important single economic factor. State capitalism seems to be the logical outcome of total preparedness.

I conclude with a few words on social trends originating in these economic tendencies. I want to stress the rise of a bureaucracy vested with overwhelming power, developing from an amalgamation of the old state bureaucracy, the industrial bureaucracy, the military bureaucracy, and the new preparedness bureaucracy. Private capitalists and moneylenders in Europe appear to be suffering the fate of the feudal lords; that is, they are losing their social functions, and with them the basis of their political power vanishes.

The latest developments in France and England seem to suggest a gloomy prospect: whereas in Germany and Italy, Fascism created a preparedness economy, in England and France, the inherent tendencies in a preparedness economy lay the basis for some kind of Fascism.

The principal question which arises from the western European experience is the following: must total preparedness be considered as a transitional phenomenon or one which may develop into a full-fledged preparedness economy? It appears as if preparedness were a link in a vicious circle existing in both national and international spheres: unsettled economic conditions, general political and economic insecurity, preparedness efforts, further unsettling of political and economic conditions, rising insecurity, more preparedness efforts, etc. This process draws part of its power from the fact that it finds all its elements in previous economic conditions.

AN AFTERCOST OF THE WORLD WAR TO THE UNITED STATES

By FRANK G. DICKINSON
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Some people want war, not because they enjoy mass murder, not because the mass hysteria of war times is an antidote for boredom, not because an ambitious king, dictator, or president selfishly desires to be a hero to history, but because they think it is a good way to end a business depression.

It is my purpose to examine this prosperity argument for war by using the World War as an example and examining its effects upon economic growth. Did the World War promote prosperity, or merely raise prices? Did the general level of production of goods and services, which is the essence of prosperity, increase or decrease during the World War? Did postwar production, stimulated by the World War, exceed prewar production of all the good things of life?

These tests must not be applied to the World War years, 1914-18, alone but must include the effects of the World War upon production and employment during the two decades since the armistice. In this industrial age a nation cannot beat its swords into plowshares in a few years; the process takes decades. In order to test this prosperity argument for war, let us examine the job-creating powers of the World War by comparing production during the post-World War period with production in the pre-World War period. The procedure will be to determine, if possible, the rate of growth in the physical volume of production and other measures of the totality of economic activity during the prewar period and extrapolate these prewar rates of growth into the postwar period in order to determine whether the postwar rates of growth have maintained the prewar pace.

In one sense of the term, every year in American history has been a war year, a prewar year, or a postwar year. With some qualifications, the two decades previous to 1914 should offer a comparable period to the two decades since the World War. The early years of the 1890's were not prosperous on the whole. Although prices had fluctuated, the movement had been gradually downward since the end of the Civil War. The failure of Baring brothers in 1892 had precipitated a financial crisis in London and New York. Courageously, President Grover Cleveland had refused the pleas of the cheap-money advocates of his day and insisted that our paper money should be redeemable in gold, even though the Treasury supply of gold was dwindling rapidly. It seems better to exclude the early and middle years of the 1890's from the prewar period, because the rapid improvement that came after William Jennings Bryan was defeated in

1896 should be regarded as a normal reaction to the depressed years 1890-96. In fact, 1897 and 1898 ought to be excluded on the same grounds. So I have chosen 1899 as the first year of the prewar period, even though the prewar period is thereby reduced to a decade and a half as compared with the postwar period of two full decades. The second reason for excluding all except the last year of the 1890's is to avoid overstating the case against the World War. Any line of growth starting from 1896 will have a much steeper pitch than one starting in 1899. The steeper the pitch of the prewar line growth, the greater would be the postwar deficit in production. The case against the World War is bad enough without trying to make it worse by starting the prewar rate of growth in the year of lowest production.

It may be well to observe at this point that, so far as I have been able to determine, the rate of growth in the physical volume of production during the decade 1897-1906, inclusive, was more rapid than the rate of expansion in production during the booming 1920's. The golden era of American industry (except for the one serious setback to business expansion in 1907-08) came at the turn of the twentieth century, rather than in the late lamented 1920's. Looking at the world today, it seems hard to expect such an idyllic period of international and domestic political and economic adjustment to reappear in the near future, perhaps not during the lifetime of any person present here today.

So the prewar period is to be 1899 to 1913. Because I am attempting to measure the effect of the World War upon production, it seems unwise to include the months of America's neutrality, 1914-17, since their inclusion in the prewar period would make the prewar rate of growth greater and the production curve steeper. I wish to forestall any charge of deliberately attempting to overestimate the postwar deficit in production. In order to avoid starting the prewar period in any phase of the short business cycle, it seems best to make three measurements of the prewar rate of growth: 1899-1913, 1900-13, 1901-13. This has the unfortunate result of making the prewar period even shorter, but does avoid the bias of using an initial year in any one phase of a business cycle.

A number of years ago I started out to develop an index of production of my own. After testing more than a hundred series, I decided to use those already developed. Therefore, I have used the four indices of production developed by Professor Frederick C. Mills, Dr. Carl Snyder, Professors Warren and Pearson, and Dr. Warren M. Persons. Each of these four series was used separately and then a simple, unweighted mean of the four was used alone. In order to avoid confusion, reference will be made only to the results obtained by using the average of the four series, although the postwar deficits in production indicated by the first two series, those of Mills and Snyder, are considerably lower than the deficits

indicated by the use of the last two series, those of Warren and Pearson, and Persons.

Each of these famous statisticians used slightly different methods and data in the development of his index numbers of production. There is no time to discuss the differences in the methods and data employed for these indices, with which many of you are already familiar.

In order to allow for population growth, the average of these four series was divided by an index of the total population. Unfortunately, this method of reducing the data to the customary per capita basis does not entirely eliminate the influence of population growth, because the number of persons at the productive ages of life, say twenty to sixty-four, has grown more rapidly (1.99 and 1.74) since 1899 than the entire population. From the standpoint of production, it must be recognized that retired citizens and children make little contribution thereto. Since the total population has grown less rapidly than the productive portion of the population, dividing the average index of production by an index of the total population for each year since 1899 gives the index of production a very considerable upward bias.

This upward bias cannot be measured and eliminated by using a population index covering only persons from twenty to sixty-four years of age unless it can be proved that a person at sixty is just as productive as a person from twenty to fifty years old, because the age distribution within this group, twenty to sixty-four, has shifted upward. It seems better to avoid these actuarial and statistical problems by using an index of total population as the divisor, and warning the audience that such a procedure gives a series a strong upward bias. From the standpoint of consumption, also, an upward bias results, because the consumption needs of those at the active ages of life are undoubtedly greater than the corresponding needs of those who are too young or too old to work.

There are other biases of production indices, most of which are downward biases. Time does not permit a detailed listing and discussion of the upward and downward biases in an "all" series designed to measure changes in the total volume of production, including services. The upward bias created by using an index of total population for placing the index on a per capita basis may more than offset the downward balance of the inherent biases; contrariwise, the net balance of the biases may still be downward or, miraculously, they may exactly cancel. In using the data for a comparison of prewar and postwar years the only requirement is that the biases be constant factors. For example, economy in the use of materials began before the World War. If the rate of saving materials in the postwar period merely continued the prewar rate, this bias would not affect the interpretation of the results.

If the biases of an all production series could be measured, they could be eliminated; since they cannot be eliminated, the conclusions must recognize them. Even if the net bias is considerable and downward for the purposes of this measurement of the aftercost of the World War to the United States—and I have a hunch the opposite is true, although my hunch is not susceptible to proof or disproof—few students would assert that the biases account for all the postwar deficit in production (that it is only a "deficit" in the production index), and most certainly no such claim would be advanced by students who realize that millions of persons were unemployed during the last nine years of the two postwar decades.

Such a measurement of production growth in the prewar period on a per capita basis raises the question of using the geometric trend. The trend line formula is $y = ar^x$. The implication of this geometric trend is the expectation of a constant rate of growth per capita. This does not seem to be too high a standard to establish. An arithmetic growth implies that the rate of growth is constantly decreasing toward a zero rate asymptote. It is difficult to justify the use of a per capita rate of growth that will someday come infinitely close to zero. A rate of growth somewhere between the arithmetic and geometric would involve some kind of a wave movement or the assumption of a business cycle movement somewhat longer than the short-time, three-to-five-year, business cycle; and one of my purposes is to demonstrate the existence of Long Cycle III, the third Kondratieff, as Professor Schumpeter would say. For these reasons, the measurement of this aftercost of the World War has been made with constant rates of growth per capita.

The prewar rate of growth in the physical volume of production as measured by the average of these four series was slightly over 1 per cent per annum. The values of r in the equation $y = ar^x$, successively for the periods starting with 1899, 1900, and 1901 and ending with 1913 were 1.016, 1.015, and 1.013, respectively; that is, the rate of growth in the physical volume of production per capita per annum from 1899 to 1913 was 1.6 per cent; from 1900 to 1913, 1.5 per cent; and from 1901 to 1913, 1.3 per cent. The differences in these rates of growth largely reflect the differences in the levels of productive activity prevailing in the three initial years of the prewar periods chosen.

Now if these prewar rates of growth are extended into the two postwar decades it is found that only in the best years of the 1920's did the average index of production touch this extrapolated prewar trend line. The total volume, not the per capita volume, of production in 1929 can be used as the unit of measurement. Add the production of the many deficit years and subtract therefrom that of the few surplus years; the total deficit is almost four times the volume of goods produced in the

banner year of 1929. Most of this deficit is for the 1930's.[1] This is an average figure, as the deficit measured from the extrapolated 1899-1913 line is the largest, and from the extrapolated 1901-13 line the lowest postwar deficit in production is derived.

The aftercost of the World War to the American people as indicated by these measurements is almost four times the volume of goods produced in the banner year of 1929. Truly a lost generation in the production and enjoyment of the good things of life! Who then can claim that war is good for business, that war is a good way to end a depression and start a period of prosperity? But the task of measurement is not yet complete. Does it necessarily follow that this difference in pre-World War and post-World War production was due to the World War? Second, there are many questions to be raised concerning the methods of measurement. Also, it might be asked whether this aftercost is due to the World War or to political and economic mismanagement since the Armistice. Perfect human beings would avoid the errors of peace and, in fact, would never resort to war. The answers to all three questions involve a consideration of the theory of the long-cycle or long-wave movement in economic activity. Let us leave the field of statistics and examine the course of economic development with a dose of economic theory.

There are five distinct lines of evidence tending to indicate the existence of a great wave movement in economic activity which began in the late 1890's. They are as follows:

1. The long-time cycle in wholesale commodity prices has been revealed clearly in the studies of Warren and Pearson, and of Tucker, and in the compilations of other price series by Carl Snyder. Each long-time curve of prices reveals wartime peaks in wholesale commodity prices and postwar valleys. Since 1790, there have been three price peaks—in about 1815, about 1865, and about 1920. This line of evidence, of course, is weak because prices do not measure the volume of economic activity.

2. The second line of evidence is furnished in the studies of Thorp and Mitchell. In their study of business annals, they have shown that the years of prosperity outnumber the years of depression during these two or three decades of rising prices preceding the wartime price peaks, and that the years of depression are slightly more numerous than the years of prosperity in the long downswings from the wartime price peaks to the start of another upswing of prices. Of course, this evidence gleaned from business journals partly reflects the opinion of these careful investigators; furthermore, it reveals nothing about the amplitude of the curve of business activity. A few years of intensive prosperity may offset many

[1] There would be no deficit in 1940 if the production index rises about one third above the 1939 level. Such an increase in production would absorb most of the unemployed and might require a longer work week.

years of depression and moderate recovery. On the other hand, a short, sharp, bitter, and deep depression may counterbalance a much longer period of recovery and moderate prosperity. Not knowing in which direction the balance in amplitude lies, it is helpful to recognize that the relative duration of prosperity and depression is not proof of the long cycle but only evidence.

3. The third line of evidence is to be found in the writings of Kondratieff, von Ciriacy-Wantrup, Schumpeter, and many other investigators. To some extent these students of the long cycle or long wave make use of the first two lines of evidence as well as of the fourth and fifth. Critics have contended that their statistical evidence is weak and that their theoretical and historical evidence is at best controversial. But I insist that their writings do furnish much evidence that our economic development has passed through three long cycles since 1790, with each of the peaks occurring soon after the end of major wars and the valleys occurring a quarter or a third of a century later.

4. The fourth line of evidence is to be found in the social and economic—if not also the political—history of the American people. Whatever one may think about the shortcomings of even the best indices of the physical volume of production, he cannot ignore the record of unemployment, riots, economic suffering, and privation that have largely been confined to the worst years of these long downswings of the three long cycles. Unfortunately the ups and downs of our economic, social, and political history cannot be shown in the form of a precise and jagged curve on a chart; yet we know when those ups and downs have occurred. Wars are high ranking historical events.

5. The fifth line is to be found in the history of production and productive activity. A depression has different meanings to different groups of citizens. To a worker, a business depression means unemployment; to a farmer, it means low prices; to a businessman, it means red ink. Students of business cycles may talk about fluctuations in the totality of economic activity, but no one has ever measured the totality. Yet if we must select a single index to measure long-time changes in prosperity and depression, an index of the physical volume of production would probably have the fewest disadvantages. A national income series, deflated for price changes, would be very helpful, if anyone knew how to deflate a national income price series for price changes. In my own investigation, I found that the highest value for r in the equation measures the rate of growth in per capita production for the period from 1900 to the World War production peak of 1917.

I consider that these five lines of evidence provide strong support for the statement that the deficit in production since 1918 is one aftercost of the World War to the American people. There are other aftercosts. The sta

tistical evidence indicates that a peak was reached between 1915 and 1920. What event occurring in that interval, other than the World War, could have ended the two-decade-long upswing in economic activity? The World War cast a long economic shadow over two and possibly three postwar decades.

The long cycle or wave centered upon the Napoleonic Wars seems to justify the use of the term Long Cycle III for the four decades beginning with the late 1890's. The long cycle centered on the late 1860's is another case in point. In the preparation of this paper the investigation was limited to the last four decades. My attempt to measure production was confined to the long cycle centered on the World War; but a few supplementary observations in regard to Long Cycles I and II may be helpful. Agricultural production per capita in this country has been more stable than industrial production; at least, it was more stable during the past century and a half when it formed a larger proportion of total production and when our population was increasing. Therefore, Long Cycles I and II should have been flatter than Long Cycle III; and II should have been flatter than I for the same reason and also because the Napoleonic Wars caused greater economic disturbances than our Civil War plus the Franco-Prussian War.[2]

Absolute proof of cause and effect relationships in any branch of the social sciences is, of course, impossible. If absolute proof is required, this type of study of the terrible consequences of war is ended before it begins. Absolute proof that the postwar deficit in production was due to the World War would require a backward march of Father Time and a re-enactment of the last four decades without the World War. The impossibility of making this terrestrial chronological experiment under controlled laboratory con-

[2] Some students may be interested in one statistical by-product of this study. How many years should any time series include in order for the calculation of a secular trend to be reliable? The secular trend lines fitted to data covering the 1920's when extrapolated into the 1930's look like clouds floating high above the horizon, for the 1930's were a depressed decade. When all the pessimists extend their secular trend lines out of the 1930's into the 1940's will these trend lines ten years hence resemble the course of a submarine?

This long-cycle or aftercost-of-war concept suggests that secular trends for an "all" series should cover one complete long cycle. The prewar rate of increase was too high; the postwar, too low. The normal rate of growth in production per capita covering both periods is slightly less than 1 per cent per annum. Such a geometric trend in a per capita production series will not bisect every short cycle, will not eliminate the necessity for economic analysis. What is the value of a secular trend fitted by the best of mathematical formulae if it cannot be rationalized by economic history? One answer is that the secular trend is satisfactory because it fitted the period covered, be it the 1920's, the 1930's, or the 1940's, and there let the matter rest. Is this not another way of saying that the statistician does know how to calculate normal?

Is it unreasonable to contend that the quantitative economists must either determine reliable normals for their time series without equivocating or they must regard themselves merely as members of the historical school of economic thought equipped with precision tools for measuring economic forces in an ever changing historical setting? Is it too much to hope that a study of the aftercost of wars and of long cycles will aid students of the short cycle in their present dilemma about secular trends and normals? Long cycles are a part of the cycle theories which emphasize (1) external causes and (2) changes in the rate of investment.

ditions would frighten a physicist or chemist away from the study of long cycles and the aftercost of war. Part of the joy of studying economic activity lies in one's inability to furnish absolute proof that event B was caused solely and entirely by prior event A. Part of the charm of the study of economics for many of us would be lost if we could always isolate cause and effect. So I am content to state the results of my measurement of production in the pre- and postwar periods, and charge the deficit to the World War with the hope that the five lines of evidence will support my statement of cause and effect.

Conditioning Factors. Critics of the long-cycle theory have contended that the level of economic activity since 1918 would not have duplicated the previous two decades even had there been no war. As I have previously stated the prewar rate of growth was probably too high to be sustained because of the ideal conditions that made that period a golden era of American industry. The World War ended that period. Hence, the prewar rate of growth is higher than the true rate of growth in production for the entire four decades covered by Long Cycle III.

But critics who doubt the existence of Long Cycle III do have a good case. There are at least three major factors largely independent of the World War which will prevent Long Cycle IV from duplicating Long Cycle III just as III differed from I and II. The first of these factors is the approach of a stationary population and the rapid aging of our population. Despite the long-cycle population theory of Eilert-Sundt and others this population factor seems to be independent of the World War. As we strive to look into the 1940's and 1950's, we should remember that even if our nation passes out of the shadow of the World War during these next two decades, the shadow of a declining and aging population will still lie across the path that businessmen and politicians must travel. Our future will be age conscious, not class conscious. The old prewar rate of expansion in industry, agriculture, and population should be forgotten in planning for the future. Our growth will be greatly modified by the expected slow rate of growth in the population and the rapid increase in the number and percentage of the population classified by pension laws as too old to work. Even production per capita will be seriously affected, especially production of farm products.

The second conditioning factor of the last four decades will probably continue into the future. I refer to the enormous increase in the amount and variety of consumers' wealth. According to recent studies—the Notre Dame study and one in which I have had a hand which will be published next month—indicate that somewhat less than half of the physical assets of the American people are being used for commercial production. My judgment—though I may be proven wrong later—is that the studies made to date warrant the conclusion that the consumer has displaced the producer

as the major user of our nation's physical assets. Increasingly our wealth is in our homes and not in our factories. Our factory system has become so efficient that places other than the factory are now the chief storehouses of the new wealth created by the factory system. The storehouse is now larger than the factory.

In the future the stimulus to investment of the shift from peace to war and back again—which largely explains the long cycle—must result from an increased demand for durable consumers goods rather than for durable producers goods. The consumer rather than the producer is rapidly taking command of our economy. The electric refrigerator in the kitchen is really a miniature ice factory; we shall expect more miniature ice factories for our homes and fewer large commercial ice plants. The increasing importance of durable consumers goods and the decreasing relative importance of producers goods may make it more difficult for us to get out of future depressions because inventories in the hands of consumers are usually more difficult to liquidate than inventories in the hands of producers. This factor alone would tend to prolong a depression.

The third conditioning factor is the increasing governmental control of business which may or may not have reached a peak in the decade now closing. Many economists considered our economic system too rigid and inflexible in 1930. It seems fair to state that the only remedies the New Dealers had to offer merely made the economic system actually more rigid at the end of the decade. They sought to solve the problem of monopoly by passing laws creating more monopolies—labor, agricultural, and industrial monopolies. One function of any major depression in the downswing of the long cycle is to make the economic system more flexible. The more rigid the economy, the greater will be the decline and the longer will full recovery be delayed. If our system of prices, wages, and production had become more instead of less flexible, we could welcome the 1940's with higher hopes that the long cycle had already worn itself out.

I believe that there are good reasons for expecting a lessening of government control of business during the 1940's. The pension movement is not a labor movement; neither is it a producers' movement. In prospect it is an expensive radical movement; in retrospect it will become an expensive conservative movement. *Pensionnaires* do not want high prices, high costs of living, or high taxes—except pension taxes. *Pensionnaires,* whose voting strength will increase every year, are distinctly antilabor in their sentiments, especially in England where the public pension system is older. The force of the pension movement will be directed toward securing higher taxes. But the pension leaders will not want to see industry hamstrung because they want to bleed it for themselves. To summarize, I think the taxing power will be used more and more for the benefit of retired citizens and the police power for regulating industry less and less.

So much for these three conditioning factors. Doubtless there are others. As we bid farewell to the depressed 1930's, however, we should do so with the assurance that this decade was a part of a natural postwar reaction—merely a phase of Long Cycle III.

The Social, Economic, and Political Aspects of Long Cycle III. How can nations avoid long cycles? I take the short, three-to-five year cycle for granted. Wars without currency inflation would produce postwar deficits in production, because wars create many non-price problems. A dozen new nations, a dozen new sets of tariff barriers and import quotas, a firm resolve by the German people that the British Navy will not starve them in the next war (or should I say the current European war)—these and other features of the aftermath of the World War are largely outside the field of prices and monetary matters. The only remedy for the long cycle is not inflationless war but peace. If war must come again to Europe, the stability enjoyed by the neutral Scandinavian countries during the last two decades strongly suggests that it would pay us to remain neutral. Peace is the *sine qua non* of economic planning.

The long-cycle theory is not entirely new. It is an old historical doctrine that a war usually comes after many years of prosperity and that revolutions break forth in the great postwar depressions. Millions of people, grouped into nations, are likely to become overconfident and vain in prosperity, and disgruntled and faultfinding under the goad of adversity. The democracies survived the World War. Can the new postwar "isms," products of revolutions, survive this new European war?

The upswing of the long cycle is an economic honeymoon. The world puts on rose-colored glasses. Every political device or plan seems to work well. Prosperous years greatly outnumber depression years and every political leader is a genius. Businessmen become empire builders and train their sons to plan for expansion on a magnificent scale; these sons are thus unprepared for the long downswing inevitable in their mature years, and very few of them become empire builders. The reverse side of the picture presents the long downswing when everything seems to work badly. Prosperous years no longer outnumber depression years.

It always happens that every major war produces a postwar boom, similar to the gilded 1920's of recent memory. This particular boom grew out of the wartime suppression of the demand for new automobiles, homes, and hard roads—a suppression caused by patriotism and high wartime prices. This pent-up demand, after the sharp price recession of 1921, brought about a tremendous expansion in road and home building and in automobile production during the boom of 1923-29. This postwar boom gave us a breathing spell of at least a decade and permitted several political leaders to ascend their pedestals. The Coolidge-Hoover boom of the 1920's was as much a part of the World War as the Treaty of Versailles. Yet produc-

tion in the booming twenties did not exceed the pace of prewar production trends; it was a boom in contrast with the depressions of 1920-21 and 1929-32.

War makes men dream dreams of opulence, of industrial and agricultural empires; but by 1930 the last traces of such incentives to investment had evaporated. Fortunate indeed are those leaders who come into power either on the mounting upswing of the long cycle or during a postwar boom; but alas for the poor fellow who attempts to guide the destiny of a nation through the inevitable trough of the long downswing.

Two of our contemporaries, both great and earnest men, have fallen victim to the long cycle. The first was an engineer, an efficient administrator of wartime relief in Belgium, and a competent business organizer. A few months after he entered the White House he suffered the full force of a violent reaction to the postwar boom which led up to the Great Depression.

The second great leader is even now struggling in the grip of the long cycle. Coming into power during a grave national crisis, when business levels could not go much lower, he was equipped with a cheerful disposition and a determination to solve the national problems regardless of cost. Until the current war boom started, he was confronted with the aftermath of war in the form of the second (or third) short cycle depression of the 1930's, a derivative of a whole world disarranged and disorganized by war. Every nation has striven for national self-sufficiency. Every nation has dug itself in behind a wall which prohibited the free play of the healing forces of adjustment. Like his predecessor, the engineer, this cheerful lawyer has also found the tide of time against him.

Both of these tragic figures, so dissimilar personally, were caught in the same whirlpool of the long downswing of the great cycle. It is unlikely that history will deal so kindly with the second leader as with the first. (I did not vote for Mr. Hoover.) Although his past triumphs have given him assurance, he has been handicapped by his complete failure to recognize that it was the World War and the long downswing of the postwar cycle which defeated his efforts to remedy economic conditions. Instead, Mr. Roosevelt has repeatedly blamed the economic royalists, the "tooth and claw" era of the 1920's, for the depression. It would not occur to him to blame Woodrow Wilson, his Democratic wartime chief, when he was Assistant Secretary of the Navy. President Wilson urged farmers to expand their acreage; his administration pushed prices sky-high. President Roosevelt's recent warlike statements are further evidence of his failure to identify the last war as largely responsible for the depressed conditions prevailing throughout his two terms. Why repeat the process of war and depression?

May posterity judge fairly and kindly the monumental efforts of Mr. Hoover and Mr. Roosevelt, tragic figures, both of whom tried hard to check

an avalanche crashing down the mountain side. Given the mountain peak of the World War, the avalanche was inevitable.

Before our industrial and business machine can again attain the acceleration of the prewar years, the world must first rediscover the prewar international balance of economic and political power or must formulate a new and equally favorable balance; or each nation must learn to live alone and like it. When, as, and if such a balance between nations is attained, we shall again enjoy an expansion in business and industry per capita comparable to that experienced by our fathers at the beginning of the twentieth century. We shall then come out from under the extreme edges of the long shadow cast by the World War.

The delay in our readjustment in this country to peacetime conditions has its compensations. Once our modern swords are beaten into modern plowshares, we hope it will take another generation to convert them back into swords.

Before the dawn of the Industrial Revolution, wars were not so disturbing to the economic life of nations. A man could drop his plow in the fields, fight a few years, and come back to the same old plow. The plan of life was simple and wars were not machined. A cynic might charge that the chief trouble with wars was that they rarely lasted long enough for our forebears to get accustomed to them.

There is irony in the fact that today treaties of peace are a major cause of war. In an agricultural economy all that the returning soldiers had to do was to cut down the weeds, repair the fences, and let nature take its course. After a modern war, it is necessary first to reproduce the long sequence of conditions which tempt men to have the faith to risk their savings in the long-range expansion of the heavy goods industries. Defeated nations, failing to attain this equilibrium, not only suffer internal revolutions but, in despair, are likely to turn upon their conquerors.

Left-wing critics will contend that the long-cycle theory does not absolve capitalism from responsibility for such depressed periods as the 1930's. A famous soviet economist, N. D. Kondratieff, was one of the first to develop the theory of the half-century cycle in economic development. He said that great wars are not likely to occur until a long period of prosperity has come on the upswing of another long cycle. His emphasis upon the economic causes of war (economic in the sense of exploitation rather than in the classless scientific sense) indicates that he is unfamiliar with Pericles' observations on the causes of war in ancient Greece. This famous statesman twenty-four centuries ago observed that men rarely retain the views with which they enter upon a war and that when they later look back upon its consequences they are likely to change their opinions of its causes. In 1914 only a negligible minority would have attributed the cause of war to eco-

nomic factors alone. Now that we all realize that both victors and vanquished lost the war, we feel rather foolish about the great crusade for democracy. We accuse others of starting the fight and we place the blame upon mystic economic factors. Man, as in the days of Pericles, is—and always has been—a belligerent animal. Are the personal ambitions of rulers unimportant in the present European war? One of my friends has a simple theory about wars. The modern world is large enough for only one "Big Shot" at one time; he thinks we have two or three too many just now. Give heads of government too much power and war becomes inevitable.

Kondratieff necessarily places responsibility for long cycles upon the evils of capitalism, as all loyal soviet scholars must ridicule the unstable capitalistic countries. Whatever his true thoughts, we are grateful for his implied assurance of a half century's breathing space between the World War—the last crest of the long cycle—and the next great world war. Economic planners willing to use armaments to provide employment should prepare for the next great world war in the 1970's or late 1960's. Kondratieff would also assure them that the next long upswing in economic activity will begin within a decade.

Before accepting his guarantees too literally it may be well to consider the writings of Siegfried von Ciriacy-Wantrup, another great student of the long cycle.[3] Mr. Wantrup concludes his very careful investigation with the firm assurance that the timing of these great cycles is due to the accident of war; that is, they just happen to be about a half-century long because the great wars of the past hundred and fifty years have happened to come at half-century intervals; the next great war might even start before Long Cycle III is completed. He would look for the causes of wars in the realms of psychology, sociology, and politics. Wantrup predicts that if wars come oftener the long cycle would be shorter. Kondratieff believes that the long cycle causes war, whereas Wantrup believes that major wars cause the long cycle. The current European war gives promise of becoming great enough to prove Kondratieff wrong and Wantrup right; it is too early to decide which scholar is to be vindicated and whether Long Cycle IV will have no long prewar upswing.

No matter which cart you put behind which horse, the long cycle does present the best economic hypothesis for explaining the depressed 1930's. The carry-over of wartime stimuli to expansion and investment had petered out; the new and usual peacetime stimuli to investment still awaited the attainment of a favorable international balance of economic and political power, a return of world-wide confidence in the future of domestic and foreign investments. In the long-cycle sense, during the 1930's, we were in the mud between the shore and the channel.

[3] A copy of Professor J. A. Schumpeter's extensive discussion of long cycles was received too late to be summarized in this paper (*Business Cycles*, 2 vol., New York, 1939).

If the great cycle is the result of major wars, the exact duration of any cycle must depend upon their timing. The great cycle will be a half-century long if the great wars are half a century apart; if the interval is a third of a century, the cycle will follow suit.

The great cycle of the twentieth century, Long Cycle III, foredoomed an era of business stagnation during the 1930's. Within a few days this strife-ridden decade will have passed into history. We should not blame the booming 1920's for the evils that were suffered during the 1930's. Rather, we should look back to the World War for the causes of our great and extended suffering. It matters little to the millions of unemployed that they were submerged in the downswing of the long cycle, but it is important that leaders of public thought who regard war as good for business should stop and think about this great cycle centered on our most recent war.

As the 1930's fade into history and we observe the rapid disappearance of the last marks or lines of the Treaty of Versailles on the geography of Europe, we have good reason to suspect that during the decade now ending the long cycle may have worn itself out. International postwar readjustments may have been carried far enough to remove the next decade from the shadow of the World War. A second world war would do likewise. If this be true, the 1940's, and more particularly the 1950's, should be more prosperous. The forties should be better than the thirties, yet still below the twenties. I would expect business barometers during the forties to read between these two levels, perhaps a degree or two below the midway point between the twenties and the thirties.

In our age of technology, it takes almost a generation for a nation to beat its swords into plowshares; we hope also that it will take another generation to beat them back into swords. Yet we know that postwar adjustments and "appeasement" are not a function of time; the time they require is a question of the attitudes and ambitions of rulers as well as the force of events.

POSTWAR COSTS OF A NEW WAR

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Back in the youth of the late twenty-year armistice, Professor Jacob Viner drew a distinction which it seems worth-while to recall in the gathering dusk of today. For purposes of welfare economics, Viner suggested, "the approximate but fundamental" may be more important than "the accurate but superficial."[1] This distinction will serve to point the moral of the tale which follows. The tale is the postwar costs of war and the moral is what they mean. Thus the plan is to discuss, first, how much a new war is likely to cost after it is over, and, second, what it is likely to cost. In the second part, an effort will be made to meet the possible objection that the writer is put in the position of Anatole France's philosophers, who were supposed to be engaged in "the solution, dissolution, and resolution of the Absolute, in the determination of the Indeterminate, and in the definition of the Infinite."[2]

I. *How Much It Would Cost*

We turn first to the more or less "accurate but superficial" matter of quantity. The postwar costs in question are as yet in the future. Since it makes a difference to the analysis, we should remember, as Liddell Hart says the military men commonly do not, that we are dealing with a new war, not an old one. Call the war the one in which we Americans are thinking of becoming engaged. It is true that being "out" of this war would bear some resemblance to being "in" it, but the two would differ so much in degree that we are mainly concerned with the results of being in it. Again, there are various ways of being in it. We might be in it only with trade weapons, or, if in it with shooting-irons, we might heed General Smedley Butler's advice to enfuriate the foe into coming over here. But, since there is much in Napoleon's theory that it is good policy to assume the bad, let us suppose we are to be in it over there, with an A.E.F.

Now, there is a close relation between the total cost of being in the war and the distribution of this total between wartime and postwar periods. Both depend on the manner of marshaling resources for the war, whereas the manner of marshaling resources depends chiefly on the military character of the war.

Military Character. On the military front, what counts is not so much the direct destructiveness of weapons as the element of mobility. High mobility means that the advantage lies with the offensive, and that the chances are

[1] "The Utility Concept in Value Theory and Its Critics," *Journal of Political Economy,* XXXIII, 659.

[2] *The Revolt of the Angels* (Dodd, Mead & Co., 1914), p. 17.

good for a quick decision and a low cost. Immobility, or an advantage for the defensive, makes for a stalemate and a high cost. This was what Count von Schlieffen saw through the clouds of incense which romantic "historians" had wafted over the Germanic Tribes. It is this which Quincy Wright makes clear in his brief account of some half-dozen "technique cycles" through which war has run since the Fall of Rome.[3] Ludwig Renn, a German veteran of the World War and the Spanish Civil War, has recently described such cycles in some detail.[4] Each cycle begins with some technical development—in weapons or in the methods of using them—which makes for mobility. As in football, the first possessors of the innovation move freely and score quickly. Later the development becomes more common property, while at the same time defenses against it are perfected. Then scoring is slowed down, and there are likely to be scoreless ties unless one side can wear the other out. The game loses its fun. Thus in the World War the sheer size of the opposing forces, the similarity between the opponents, the impassable flanks of the main battleground, and the technical character of the apparatus employed between these flanks, all so played into the hands of the defensive that comparative exhaustion had to determine the outcome. Today we have the Douhet theory of mobility by air, as well as the *Blitzkrieg* variant of this theory. We even have the confusing spectacle of war departments learning about frontal assaults from experience. And yet in all the panoply of man-killers and lifesavers, in all the main factors which determine the fate of mobility, there is little to justify us in expecting anything but another huge stalemate. Therefore we should count on turning over to Mars the use of perhaps half our limited economic resources, perhaps much more than this.[5]

War Resources. When it comes to getting the resources, we shall not be able to go far by passing the buck, by borrowing from our neighbors and forgetting to pay them back. The actual methods will come down to essentially the following. First, certain "noneconomic" resources may be turned to economic uses. Lawns and parks may be cultivated; more economic service may be exacted from children, women, and the old; leisure classes may be set to work; and the leisure time of the regularly employed may be curtailed. Second, the productivity of resources in ordinary employments may be stepped up. Patriotism and regimentation may make it easier to decrease competitive wastes and the greater wastes of monopolistic competition. Third, income now used for ordinary capital maintenance, replacement, and extension may be used for war instead. Fourth, resources may be released

[3] *Causes of War and Conditions of Peace*, 1935, Chap. II.

[4] *Warfare: The Relation of War to Society*, 1939.

[5] In *The Effects of the War*, etc., pp. 197-198, B. M. Anderson estimates that not far from half the "gainfully employed" in the United States came to be employed in the prosecution of the World War. In *Recovery, the Second Effort*, pp. 241-242, Sir Arthur Salter tells us that Britain devoted more than half her productive effort to this conflict.

for war by reducing ordinary consumption. All these methods will be used, but in a war of attrition the burden must fall mainly and increasingly on ordinary consumption.

Wartime and Postwar Costs. During the war, therefore, we shall bear a heavy cost in the form of increased work, which may be called decreased leisure, and a still heavier cost in the form of decreased consumption of ordinary commodities. After the war, we—what there are and is left of us—shall bear war burdens in the following main forms.

First, the effects of an internal debt swollen by wartime borrowing will not be limited to personal distribution. The incentive to produce will be repressed. The outcome might be otherwise under taxes so sharply progressive as to constitute a powerful dose of the "capital levy." But the chances of getting bondholding taxpayers to repay themselves by means of such an impost are not bright. If the debt is paid by inflation—a device which would put part of the load on workers and other receivers of relatively fixed incomes—the bondholders will suffer as *rentiers* and everybody will suffer because of the effects on business. Suppose a policy of very slow retirement of the debt is tried. As postwar taxes are typically less progressive than wartime taxes, there will be much "politics" and ill will. At the same time the debt will continue to cast a shadow of apprehension as to the future of government fiscal policy. Finally, outright repudiation, although in one way strongly resembling a capital levy, will impair the validity of contract, shake confidence, and carry private insolvency in its wake. Even the fear of it will have somewhat similar effects. Whether the creditors do or do not repay themselves, therefore, internal debt will cause a serious postwar burden in the form of reduced production.

Second, the effects of a loss of economic capital will be felt. Either postwar production must suffer from a capital shortage or else the loss will have to be made good by increasing production and decreasing consumption after the war. Much capital will have been literally shot to pieces or sent to Davy Jones's Locker. Depreciation will have been prodigiously rapid. A great deal of capital will prove useless to peacetime economy. In short, to the direct loss of ordinary buildings, merchantmen, and the like, there must be added other ordinary capital which we might have had but for making bombers, battleships, etc., to be destroyed, worn out, or rendered worthless by the return of peace.

Third is the loss of human capital. There will be direct losses caused by killing-tools and bigger indirect losses in the shape of the effects of undernourishment and exposure on epidemic and other diseases. In the matter of deaths, the Swiss authority, L. Hersch, believes that the indirect losses were twice as great as the direct during the World War.[6] As we shall see

[6] *What Would Be the Character of a New War,* Interparliamentary Union, 1933, pp. 274-314.

later, the death of men without dependents does not involve postwar costs, except in so far as effects on saving and eugenics are concerned. But the effects of wartime overwork, underconsumption, and the hardships of military life will be felt long after the war. The training of youths and infants will have suffered. There will be damaged capital in the form of the crippled and the nervously deranged. The eugenic effects are open to debate. Although direct losses of potential fathers will have pertained to men somewhat above the general average of quality, this result will have been more or less offset by a concentration of indirect losses on the relatively unfit.

In placing an economic value on human capital, economists generally use the opposite approach to that which is used in evaluating the plant of a natural monopoly. E. L. Bogart[7] and J. M. Clark,[8] for example, follow precedent by reaching the valuation of lost lives via income instead of cost. Thus, the loss of a man is taken, at the time of death, as being equal to the capitalization of the future earnings less the future consumption which probably would have existed had the man not been killed. Bogart cites numerous interesting estimates based on this procedure. Discounting at 4 per cent, Clark tentatively charges off American deaths in the World War at about $10,000 apiece. But from this figure he makes a large deduction, on the ground that most of our soldiers were unmarried and that hence a large part of their surplus of earnings over consumption was destined for nonexistent children. The result is to rate Americans at around $6,000 or $7,000 a head. As indicated above, postwar losses of human capital stem mainly from "damaged capital" and from the death of persons having dependents. This point will be reconsidered later.

Fourth, there will be costly maladjustments left over by the war. That is, frictions of various kinds will slow down the reallocation of resources according to peacetime demand. In their *War Debts and World Prosperity,* Moulton and Pasvolsky genially rebuke a lady who had scorned their suggestion that mere "dislocations" would be more serious than the devastation which she had seen with her own eyes. To judge by the Reparation bill, the devastation of the World War amounted to only 30 billion dollars or so. As for the dislocations, the problem is to compare postwar with prewar idleness of resources and to analyze the responsibility of war for the difference. Of course the dislocations will do vast damage quite apart from their relation to business cycles. Leading belligerent countries in Europe have suffered chronic depression ever since the World War. Yet some special attention should doubtless be given to the first major cyclical depression following the war.

Professor Hansen points out that the World War encouraged the excesses of the New Era because the abnormal conditions which it created led men

[7] *Direct and Indirect Costs of the Great World War,* 1919, pp. 274-275.
[8] *Costs of the World War to the American People,* 1931, pp. 203-226.

to believe that the business cycle was a thing of the past. He also claims that wars are bred in the upswing of the long-wave cycles described by Kondratieff, that they tend to reverse the long-wave movements, that in the downswing of the long waves cyclical depressions tend to be exceptionally long and deep, and that downswings and their depressions are prolific of revolution.[9] But it does not seem to make much difference whether we suppose, with Hansen, that long waves influence business cycles or suppose, with other writers, that the causes of the long waves are to be found in the cycles. Either way, war has its innings. Further, the contribution of war to depression is impressive on any one of several leading approaches to cycle theory. Accepting a "purely monetary theory," our war will institute enough expansion and contraction of "consumers' outlay" to satisfy a Hawtrey. On the "monetary theory of overinvestment," public borrowing and central bank policy will shift the money rate of interest far enough from the equilibrium rate to meet the requirements of a Hayek. On a "technological" version of overinvestment, one factor alone, the dearth of capital in the wake of war, should be enough to start the sort of investment spurt which our Cassels and Hansens normally attribute to such things as inventions and new goods. General underemployment of resources, too, ought to give "derived demand" plenty of room for acceleration.

In any case, the war will make our economic system more vulnerable to cyclical shocks. It will expand productive capacity for certain goods far beyond peacetime requirements. It will shift the economic and financial center of gravity away from the war zone, with reshifting to come later. It will change the whole balance of international trade and investment. By intensifying nationalism and redrawing boundaries, if not by repeating reparation and war-debt problems, it will rear fresh obstacles to trade. It will cause alternate inflation and deflation, and an uneven stabilization of national currencies. Probably a wartime relaxation of antitrust laws will make for sticky prices on one side and unstable monopolies on the other.

Any attempt to estimate the damage in advance is likely to evoke an economic smile. Yet note that the annual losses caused by the Great Depression compared not too unfavorably with the annual costs of the Great War. That is, the war was wasting about half the resources of leading belligerents, while the depression was keeping idle perhaps from a fourth to a third of the productive capacity of leading industrial nations. Now, suppose that major depressions following within about a decade of major wars average around twice as costly as other major depressions. And, in view of the factors considered above, assume that the wars account for the difference. What all this will count up to after our next war, deponent saith not; but the two assumptions would seem to suggest a sufficiently conservative basis for estimates.

[9] A. H. Hansen, *Economic Stabilization in an Unbalanced World*, 1932, p. 97.

The losses just outlined apparently constitute the main postwar costs of war. There may be offsetting items. Thus, wars of exhaustion doubtless reduce economic inequality; but they do so by the device of making everybody poor, and, in any event, changes of distribution raise value problems which do not submit readily to quantitative solutions. Again, war encourages temporarily a fuller employment of resources. It might be argued that, by giving away our farm surpluses and decreasing industrial unemployment, we could now make the Allies a huge economic present without cost to ourselves. But the long-run effects of such a policy are doubtful, and the status of the resources which are supposed to be unemployed before being turned to war raises a value problem which will be considered later. As it is clear that the "definite but superficial" turns out to be very "approximate," indeed, let us turn to the "fundamental" problem of what any quantitative estimate would mean.

II. *What It Would Cost*

Here we shall reconsider, in their former order, the leading sources of postwar cost.

Internal Debt. Pigou and Dalton are in essential agreement on one reason why a big internal debt discourages production.[10] The reason is that the prospect of progressive taxation induces men to use more of their energy for the production of leisure instead of wealth. If every taxpayer were a creditor of the government in just the same amount that he was a debtor to it, if he were to get as a bondholder just what he paid as a taxpayer, and if he understood his position, the outcome would be different. Again, so little is really known about incentives that the weight of prospective taxes as a deterrent to production cannot be estimated. But the general conclusion holds that at some point the prospect of graduated imposts creates a balance of preference for leisure. What follows is that we cannot reach conclusions about the effect of a given policy on economic welfare unless we consider noneconomic welfare. Economists commonly get around this difficulty by resort to the "margin of indifference"; that is, the marginal value of an hour of leisure must be about the same as that of an hour devoted to economic production, or else men would not divide their time as they do between leisure and economic pursuits. But, even if this is granted, the question remains, What determines the margin? Where we are trying to predict what a policy will do, an abstract equilibrium between economic and noneconomic values is not enough. We need to develop the relatively unexplored field of incentives, as Professor Paul Douglas tried to do years ago.[11]

Economic Capital. With respect to economic capital, a *Royal Oak* on the

[10] A. C. Pigou, *The Political Economy of War,* 1921, Chap. XVII; Hugh Dalton, *The Capital Levy Explained,* 1923.

[11] "The Reality of Noncommercial Incentives in Economic Life," in *The Trend of Economics,* edited by R. G. Tugwell, 1924, pp. 153-188.

bottom of Scapa Flow is not a loss in the same sense as is a merchantman on the bottom of the Atlantic. The latter represents a loss of peace values. The former, as it is presumably useless to a really peaceful world, is a loss of war values. From the standpoint of peace values the loss occurs, not at the time of sinking, but at the time of construction, because it is the construction which prevents alternative peace values from coming into existence. The point is that war costs, and all other costs, must be related to scales of value in order to give them meaning.

Human Capital. With respect to human capital, let us reconsider Clark's method of setting valuations on lost lives. Clark deducts the future consumption of both the casualty and his nonexistent children. He would agree with Pigou, I think, in including in war costs both what is destroyed and what additional things we might have had but for the war. The question is the proper interpretation of the term "we." Clark's interpretation is logical for a past war. The "we" group which survives the World War does not include the men killed and the children they never had, and it is natural to exclude consumption which could not have done "us" any good. Before a war, however, "we" includes people whose existence is to be cut off or prevented by the war. The time dimension of the entity called "society" runs forward as well as backward. The estimated costs of the war include all values to be lost as a result of the war. Among these values are the values, to workers and their dependents, of consumption which certain workers and their dependents would enjoy but for the war. Since it is the war which will obviate these valuers, we can hardly omit these values on the ground that the obviation of the valuers will make them nonexistent. In the present, what workers consume is not deducted from the national income, because what workers consume is valuable to workers and workers are part of "us." Perhaps a fascist clique should exclude this consumption as being a maintenance cost and not yielding net value to the clique. In a free society, however, productivity is figured differently for men than for machinery or mules. What free men use up for their own maintenance in the process of production is not deducted in estimating what the society produces. And similar values which are to be obviated by a future war must be reckoned as costs of the war. It is true that they will not be postwar costs of this war. Instead, they will be incurred when men are killed and the nonexistence of their children is thus assured. A war annihilating the whole of mankind could have no postwar costs to mankind, but, before the war, such an event should be treated as a cost.

And this has a bearing on the cost and income approaches to the valuation of lives. If the men directly and indirectly lost comprise a representative sample of the whole population, with respect to age and productivity, it makes little difference which of the two approaches is used. In this case a

man is worth what he costs and he costs what he is worth, except for whatever net addition he would make to society's capital.

Postwar Maladjustments. With respect to postwar maladjustments, certain depression losses are fairly chargeable to the war because the values lost in the depression are peace values. In estimating such a loss, we should compare the value of the leisure enforced by the depression with the value of the lost productive activity as an end in itself, and then see whether we ought to add to or subtract from the loss taking the form of reduced national economic income. The result would doubtless be a big addition to the total loss. Contrast the case where leisure is curtailed during war. In a democratic country, this should represent a gain in terms of war values but a loss in terms of peace values. Again the point is that our estimate of war costs depends on the value standards which we use.

Postwar Values. The real problem of cost is well illustrated by Professor Joerg Joergensen, of Denmark, in an account of the changes in value wrought by the World War.[12] During the war, fear gave way to elation, elation to bitterness, and bitterness to despair; while among the prominent postwar values were those of the undisciplined "flaming youth," who pointed to the war as proof that the counsel of elders was wrong and that whatever was young was right. Here it is obvious that we can neither accept demand as a datum nor select some given set of values arbitrarily. We cannot, as the Pragmatists are sometimes accused of doing, just accept the values which are being accepted. "To a dog there is nothing like a dog," and ditto a Flaming Youth. The case is like the one described by Holmes's poem about Rudolph the Headsman. Rudolph worked so smoothly that the victim did not know he was dead until a pinch of snuff produced a sneeze which jarred his severed head from his shoulders. We might be dead enough for the lack of good values, but we should never know it without some sort of snuff to set us evaluating values themselves.

To take another example, war apparently has something to do with postwar revolution. Is the latter a cost of the former? There is room for a difference of opinion, but clearly little is to be gained by choosing between the opinions of the Comintern and the D.A.R. The story goes that Stalin, when told that foreigners thought it did not make much difference whether Russia was under a Romanov or a Bolshevik despotism, replied, "Well, it makes a lot of difference to us!" As is common in the discussion of "isms," he accepted one set of values arbitrarily.

In a similar situation, A. C. Pigou adopts a solution resembling that of Stalin, although it is less frank.[13] His problem is raised by the fact that changes are always occurring in the concrete contents of the stream which

[12] *What Would Be the Character of a New War* (cited above), pp. 250-273.
[13] *The Economics of Welfare,* 2d ed., 1924, pp. 44-48.

comprises the national income, or national dividend. To determine what happens to the dividend between two periods, say 1930 and 1940, we need to compare the values of the goods extruded from the stream with the values of the goods introduced into it. The measuring rod of money works only if there have been no changes in tastes and personal distribution to alter value standards. But if standards have changed, Pigou ducks the "determination of the Indeterminate," as he seems to regard it, by saying that the dividend may have moved one way according to the 1940 standard and the other according to the 1930 standard. Such a solution is less than we have a right to expect from a tremendous tome purporting to deal with the economics of welfare. Matters are not much improved by Pigou's statement that an increase of the dividend according to one standard is probably also an increase according to the other. For what this essentially means is that probably culture is stable enough to keep the two standards fairly close together. But it happens that our most important social problems relate not to similarity but to diversity of standards, because culture is made notoriously unstable by events like wars and revolutions, and it needs to be evaluated whether it is unstable or not.

Unless this problem is faced, it is hard to make sense out of the alleged costs of war. Within the framework of a given set of values, we may be able to deal with the opportunity costs of particular items without raising the problem of value standards. As between two different sets of values we certainly cannot. The opportunity cost of war is the loss of peace. But so does peace have an opportunity cost; namely, the loss of the values peculiar to war. In order to show that war has any net cost at all, it seems necessary to show that mankind does not get its money's worth out of a war, and this cannot be demonstrated by mere quantitative measurement. It is incorrect to say that we dislike war because it costs so much. What we should say is that war costs dearly because we dislike it so much. A colleague of Dr. Viner once summarized war by saying, in effect, that war is "dirty and expensive." But we do not have two kinds of cost here. Instead, the meaning of the "expense" is to be found in the "dirt." It is putting matters backwards to say that high tariff or any other national policy is irrational because it is costly. If we prefer the reflected glory of a warlike state to an ample consumption of ordinary commodities, there is nothing irrational in exchange controls and Big Berthas, provided they are efficient means to the selected end.

To direct us through changes of value, we need some means of comparing sets of value with respect to quality, or worth. The meaning of a change, as Cooley indicated,[14] is contained in the expression, "I have come to feel differently about it." And the same phrase embodies the essence of value standards. The quality, or worth, of a value is a matter of feeling, of taste.

[14] C. H. Cooley, *Social Process*, 1920, p. 290.

This was what J. H. Tufts meant by the following statement:[15] "The only test for goodness is that good persons on reflection approve and choose it—just as the test of good persons is that they choose and do the good." Of course the statement would make nonsense if it were put forward as logic. But logic deals in quantities, namely, in relationships among qualities, whereas Tufts was dealing with qualities which provide the data on which logic is based. Whether any rationale can be assigned to qualities—whether there can be a workable "subjective calculus," as Viner put it—depends on our ability to agree on tastes.

There can be and is substantial agreement on tastes. Qualities are not imponderables, and reflection on them does not amount to "the determination of the Indeterminate." If there is "no disputing about tastes," the reason is likely to be that there is too much agreement to leave room for dispute. It is also possible to make progress with the classification of values according to worth. Cooley gives us a start when he shows how, under the leadership of influential persons, new values slowly gain currency. Something is known, too, of the devices employed by the leaders. As Madariaga points out in his *Disarmament,* the art of suggestion doubtless assumes the main burden. The nature of language being what it is, concrete situations are made to suggest qualities. For example, the meaning of the following "labor problem" is not lost on many college sophomores:

"The golf-links are so near the mill
That almost every day
The little children at their work
Can see the men at play."

Or take the famous comparison originated by Victor Berger and often cited without recognition of its author. Berger simply suggested in some detail what furnished homes, endowed universities, staffed hospitals, etc., we might have had in place of a 400-billion-dollar war.

Even the formal classification of values is capable of no inconsiderable development. In economics, the general tendency of "principles" books, although they pretend to ignore the subject, is implicitly to classify values as "good" and "bad." Thus in an early chapter a famous textbook called attention to the need of "better wants" but pretty much let the problem go at that thereafter. Myself, when young, did take as a point of departure a classification suggested by F. H. Knight, the result being a division of human experiences into the "intuitive" and the "rational," with two main subdivisions of each. And not all teachers who had the chance omitted this material from assignments because they could not see what it had to do with economics. On the assumption that values always proceed from activities, Bertrand Russell is disposed to divide activities broadly into the creative, or constructive, on one side, and the acquisitive, or destructive, on the other.

[15] "The Moral Life and the Construction of Values and Standards," in John Dewey, *Creative Intelligence,* 1917, p. 382.

All his works are fertile in suggestions for value classification. The philosophers have explored the problem much farther than have the economists, but social science suffers from the sharp departmentalization of the two groups.

Disagreement about values probably relates far more to terminology than to qualities themselves. In establishing values, what happens is that we have experiences, communicate with one another, and reach agreements about quality. With respect to the progress of values in our own country, there would seem to be substantial agreement on two articles of faith. The first is that, in practice, the values of democracy are superior to those of autocracy. The second is that, if it is bad for the minority to coerce the majority, it is not much better for the majority to coerce the minority; that is, the values of "good" persons must have a fair trial. Such persons can be and are identified. Tentatively, or before the trial, they are broadly distinguishable as persons of high general ability and special training. Finally, or after the trial, the test must be the acceptance of their values. Adherence to any other test, as it would preclude democracy itself, would cause the adoption of values costing more than they were worth. In so far as it refuses to consent to a fair trial, of course, a democracy finds itself in the position of Rudolph the Headsman's victims. It is true that certain "intellectuals" look down on supposedly decadent democracy from the gold bar of Heaven and weep: "we hear their tears." Yet the theory that democracy does not go far in giving values a fair trial is hard to reconcile with the fact that these same mourners are able to hold their jobs. We also know where it is that members of the intelligentsia are especially out of luck. Against Washington Irving's observation that the distribution of common sense is equitable, since nobody desires any more of it than he already has, we may well set Lincoln's suggestion that God must have loved the common people or He would not have made so many of them. For that part of the intelligentsia which teaches the social studies, and for economists in particular, the problem is to develop better means for expressing values. Unless we do it, we must remain severely handicapped in discussing either the costs or causes of war. And we are not likely to do it if we insist on confining economics to the "science of price."

DOES INFLATION CHANGE THE ECONOMIC EFFECTS OF WAR?

By AARON DIRECTOR

I

The topic of this paper is that of an appropriate monetary framework for a war economy. This will surely appear paradoxical, in view of our failure to provide an appropriate monetary framework for peace, either for our general theory or in practice. On the theoretical side the problem is simplified somewhat by the fact that wars do not last forever. A given criterion, such as a stable price level or fixed quantity of money, may therefore be adopted, which as a guide to permanent policy would be subject to serious limitation. On the practical side, the problem is simplified by the unanimity of opinion which prevails during wartime. Hence, providing the administration in power accepts a given monetary policy its enactment should not prove very difficult. In the absence of strong pressure groups, unanimity of opinion among economists may be expected to be more influential in the adoption of the "right" policy, than has been the case on those few occasions when economists were of one mind.

Apology is appropriate for assuming that war will lead rapidly to full employment of all resources. The very poor record of generals in forecasting the duration and magnitude of past wars must cause us to hesitate in making similar forecasts for any future war. But unless we assume that private enterprise is hereafter not in a position to provide the necessary investment opportunities to maintain full employment, it is not unreasonable to assume that war expenditures no larger, in proportion to income, than those of 1918 will result in a rapid absorption of available unemployed resources. Until approximately full employment is established, monetary policy must be oriented around the task of increasing the aggregate output of the community, as well as making a portion of it available for the war effort. In the former respect, the problem is analogous to that which has confronted us during the present decade. Continuation of the program which now holds the field would not even require a change in the initials of some of our spending agencies. War and work begin with the same letter of the alphabet.

It is precisely because of the history of the recent past that, in considering a monetary program for war, we must give more rather than less consideration to conditions of full employment. We have lived so long in the shadow of unemployment, long enough to elaborate a theory of secular stagnation, that we may miss altogether the reversal of the trend. The current banking situation, with a large amount of balances and unprecedented excess reserves, further justifies the emphasis on conditions of full employment.

The economic tradition has been anti-inflationary since the first quarter of

the nineteenth century. That tradition was itself established during a long war, in a country which had suspended specie payments and operated under an inconvertible standard for a period of over twenty years. In view of the paucity of price data at that time and the skepticism about the utility of index numbers before they were widely used, it is not surprising that though some attention was devoted to price increases as an evidence of inflation, the major emphasis was put on what can be termed relative depreciation.

This emphasis has persisted. Hence, while there has been a tendency to deprecate monetary expansion during wartime, there has also been a tendency to argue that in the midst of world inflation to which all countries contributed, no particular one should or could do much to prevent it.[1] In ordinary times there is much to be said for adhering to an international standard as a means of maintaining monetary stability. For this country to adhere to an international standard while the rest of the world is at war, or while it also is at war, involves introducing continuous instability at home without serving any useful purpose. Thus in 1915-16 our monetary conditions were being adjusted to the steady inflow of gold, the magnitude of which depended on the decisions of the allied governments regarding the amount of goods to be purchased in the United States, our willingness to take their securities, and their willingness and ability to collect American securities owned by their nationals.

The economic tradition has not only been anti-inflationary, but we have generally assumed that both inflation and deflation were monetary phenomena in the sense that they could be prevented by monetary policy. The recent discrediting of monetary policy as a means of combating deflation need not concern us. But ever since the days of Thomas Tooke it has been held by some that while peacetime inflation was a monetary phenomenon in the sense noted above, wartime inflation was inherent in a wartime economy and could not be prevented by monetary means. Tooke, as is well known, though our first compiler of price statistics on a grand scale, never used a price index. In his examination of particular prices he was always able to find explanations for the price increases in terms of supply or demand conditions created by the war itself. B. M. Anderson restated this general position as follows: The analysis applicable to increases in general prices in ordinary times "may very well be upset by the conditions of a great war. Commodities in general may grow scarce and increase in value, and under such circumstances a general rise in commodity prices indicates, not a fall in the value of money, but a rise in the value of goods."[2] What a future war has in store in the form of scope and destruction we cannot tell. The national output of the United States in terms of 1914 dollars remained ap-

[1] See H. S. Foxwell, "Inflation: In What Sense It Exists; How Far It Can Be Controlled," in *Papers on Currency Finance*, pp. 20-46.

[2] B. M. Anderson, Jr., *Effects of the War on Money, Credit and Banking in France and the United States*, 1919, Chap. XVII, pp. 196-210.

proximately constant during the years 1916-18 inclusive. In spite of the inherent difficulties involved in measuring real income, in the absence of other evidence we must infer that there was no general reduction of goods and services available for both peace and war uses. Parenthetically it may be remarked that the national output data do not support the view, for this country at least, that the war effort was made in part by reducing leisure, or utilizing on a significant scale the labor of women, children, and older persons. Substantial increases in effort during the war period are not necessarily inconsistent with the data on output or income, as they may have offset the waste and lost motion that war brought in its wake. To the extent that increased effort was characteristic of other countries it must have been due to the larger fraction of income that was used for war purposes and the greater pressure this involved on current consumption.

In view of the marked shifts in relative prices which war conditions bring forth and the difficulties of abstracting these from measures of general price changes, it will clarify the problem if we consider war inflation, not in terms of price changes, but in terms of changes in money income.

II

Whether or not monetary stability—constant money income—is to be preferred to inflation depends on the effect of each on: (1) the war effort; (2) postwar readjustment; and (3) the allocation of the burden on the various income classes.

1. War requires the transfer to government of the necessary funds for the acquisition of a given fraction of current output. It requires at the same time the shifting of existing resources for the purpose of producing commodities and services not normally produced and of increasing the output of some while contracting that of others.

The transfer of the necessary spendable funds should not prove a serious problem in a democratic community. Strictly speaking it makes no difference whether the funds obtained come through borrowing operations or through taxation. There is no reason for assuming that resources released in one field are more or less specialized than resources released in another. But while obtaining a large fraction of war expenditures from taxation may not be a necessary condition of monetary stability, it has been rightly inferred that we are more likely to adhere to a policy of monetary stability if a much larger fraction of war expenditures is obtained through taxation than was the case in past wars.

Past failure to obtain larger sums through taxation can be ascribed to the timidity of the administrations in power, and to the necessary interval between government expenditures and tax collections inherent in the tax system. There were in addition certain contributory factors not applicable to all countries. In France, for example, during the World War the administra-

tive machinery for large-scale taxation was inadequate and was further demoralized by the invasion of its territory. Germany was influenced by the conviction that its cost of the war would come out of allied indemnities. In all countries there was continuous expectation that the war would not last long,[3] and a widespread belief that by borrowing, part of the real cost of the war could be passed on to a later generation.

The gradual increase in tax levies over time is itself an indication that the limits of taxation are very flexible. The necessity for gradualness in the increase which obtains in peacetime does not apply in wartime, particularly if it is made clear that the extraordinary levies are temporary, and that all members of the community are being called upon to contribute to the war effort. That administrators underrate the willingness of the community to pay for the war by taxation is shown by the increasing proportion of war expenditure raised by taxation during the World War in both the United States and Great Britain. What can be done towards the end of a war can be done at least as easily at the beginning of a war.

The difficulty of collection should not prove a real obstacle in these days when advance planning for war is so widespread. Even in the absence of such advance planning it should not prove more difficult to improvise the necessary machinery for collecting the bulk of income taxes at source on a monthly basis than it was to improvise the machinery for the Food or Fuel Administrations during the World War.

To a large extent government expenditures in wartime are made on commodities which are generally consumed. The contraction of monetary demand by individuals whose income is curtailed would at once make available for government purchase, at current prices, a portion of the current output. There is no reason for assuming, however, that as the result of a general levy on income private demand would be contracted by the precise amount necessary for war. In general, while the transfer of spendable funds from civilians to government would lead to contraction all around, it would be greater in some fields than in others. Command over resources in general would be transferred; but in the short run resources are more or less specialized. The fundamental problem of a war economy is to effect a transfer of resources from their prewar uses to meet war requirements. Will this transfer be impeded or facilitated by monetary inflation?

Under the inflationary method increased output in the war industries will be achieved by competing with other industries, the monetary demand for whose products is not decreased, for the necessary labor and materials. As a result of the increased money wages offered in the war industries, monetary demand for the product of consumers goods industries would in fact be increased. Wages and prices will rise in both fields, though they will rise

[3] For the delay in imposing war taxation on this account in England, see F. W. Hirst, *The Consequences of the War*, p. 144.

more in the war industries. The necessary contraction will take place only in response to increased money costs. The resulting rise in prices and wages all around will make profit prospects appear promising in all industries, and lead to speculative attempts to purchase raw materials for industries which must ultimately contract their output. The continuous increase of money wages may lead to a continuous shifting of workers between and within industries, the chief result of which will be a net loss of output.

The transfer of resources under non-inflationary conditions corresponds to the type of transfer which goes on, though on a smaller scale, as there is a shift in demand from one industry to another. In the war industries where the purchases of both government and civilians are larger than the prewar purchases of civilians alone, there will be an increase of prices, the magnitude of which will depend on the elasticity of output and extent of competition. In all other industries, where monetary demand is reduced, there would be a tendency for prices to fall and wages to be reduced. The maintenance of prices and wages in some of these industries would result in an even greater contraction of output in these industries than would be the case under competitive conditions. Hence, while the transfer of labor under inflationary conditions takes place in response to the offer of higher rates of remuneration in the war industries, under non-inflationary conditions this is supplemented by the initial contraction of employment in nonwar industries, which would drive some workers to seek employment even at unchanged rates of remuneration. In the latter case the transfer process is promoted in two different ways. Just as the existence of unemployed resources at the outset of a war would facilitate passing from a peace to a war economy, so the creation of unemployment in one sector of the economy while employment is expanding in another should also facilitate the transition.

In so far as a war economy requires the production of goods which cannot be produced with existing plant and equipment, new investment must be made which may not be appropriate for peacetime production. Regardless of the monetary policy pursued, the risks involved will have to be assumed by the government in one form or another. But one way of meeting the demand for new goods is by conversion of existing plant. It is not unreasonable to conclude that conversion would be more rapid when the monetary outlay for the products of certain industries is declining than it would be if prices all around are rising, though rising more in some fields than in others. The fact that under non-inflationary conditions the basis of calculation is not upset to the same extent as under inflationary conditions, and expected future changes of prices and wages are smaller, should also facilitate the transition from peace to war. One qualification is necessary. A rapid rise of prices during wartime, when there exists the expectation that prices will fall in the postwar period, will no doubt tend to exercise a deter-

ring influence on investment in durable capital. It will do so, however, in both essential and nonessential industries.

2. Does monetary expansion during a war accentuate the difficulties of postwar readjustment? Some of these difficulties will of course obtain regardless of the monetary policy pursued during the war. The final growth of the war industries will be the same, as will the growth of war industries in particular geographic areas not suited to peacetime activities. (An inflationary program may, however, encourage extravagance among government agencies.) The elimination of government war purchases will create the same initial amount of unemployment, and the same depressed areas. To the extent that war has fostered the growth of industries that must be reduced when the channels of international trade are reopened, the magnitude of adjustment will again be the same. Nor is it apparent that the growth of nationalism and continued restriction of international trade will be influenced by the monetary policy pursued during the war.

If the unemployment which results from the postwar conditions just cited gives rise to a severe postwar depression, it will be not because of the monetary policy pursued during the war, but because of the monetary policy, or absence of policy, which obtains after the war.[4]

It is generally assumed that monetary expansion during the war must necessarily be followed by monetary contraction after the war. If the expectations of contraction are widespread and if the monetary authorities by their silence or pronouncements, even in the absence of positive action, contribute to the spreading of these expectations, then a period of deflation would set in even in the absence of the necessary postwar transfer of resources. The postwar depression of 1920-21, in the United States at least, was of short duration. But once the forces of deflation and unemployment are set in motion, there is no telling when or where the downward movement will be arrested. For a future postwar period we shall at least have the mechanism of continued large-scale government expenditures. We shall also have a more acute problem of bringing down the level of inflated war wages to the new level of prices.

In the past the expected return to gold played an important part in initiat-

[4] In view of the current emphasis on the absence of investment opportunities as an important factor in depressions, it is relevant to note that war conditions should create no special problems. The amount of investment in peacetime industries is greatly reduced. Compare the violent contraction of the building industry during the World War. This by itself should have a favorable effect on investment opportunities after the war compared with what they would have been in the absence of the war. Investment in war industries, which is not useful for peacetime activity, even though not fully depreciated because of errors of judgment about the duration of the war, will surely have no deterring effect on investment in other fields. As against this may be cited the possible greater investment in certain industries in order to meet war conditions which is also appropriate for peacetime demand. In the absence of war conditions such capacity, as in the steel industry, would not have developed so rapidly. As a result of the war, therefore, there may be no investment opportunities in particular fields. To conclude that this will have an unfavorable effect on employment is to take a very narrow view indeed of general investment opportunities.

ing a downward postwar movement. Abstracting from the redistribution of the world's stock of gold which takes place during wartime, the level of world prices may rise to such heights as to make it impossible to maintain that level with prewar legal or customary reserve ratios. The attempt to restore the gold standard on the prewar basis will automatically involve a deflationary policy. Wars in addition lead to a redistribution of the world's stock of gold. Those countries which find themselves with inadequate reserves will in the attempt to return to gold start a deflationary movement that may spread to other countries. Even in the United States, whose stock of gold increased by approximately 50 per cent during the World War, the approach of the reserve bank reserves to the legal requirements caused by increased reserve bank credit and some loss of gold, was an important contributing factor in the postwar deflation.

The return to gold after a future war is less likely, to say the least, than was the case after the World War. In any event the mechanics of devaluation are better understood and less repugnant than they were then. We must conclude, therefore, that monetary policy during the war will influence the postwar transition mainly by establishing the presumption that if we have no policy before the war, and adopt none during the war, we are not likely to have one after the war.

3. The case against war inflation has rested mainly on the inequitable character of the war burden which obtains under that method. However the additional spendable funds are obtained, when they are spent the dilution of existing balances involves a levy on all individuals in proportion to their money balances. The initial dilution will depend, of course, on the range of government expenditures. Whether by this method the wage-earning population, for example, contributes more than it should will depend, of course, on what other levies are made on it and on the rest of the population. Taken by itself, however, we would all agree that a levy in proportion to money balances is not a fair levy.

This initial impact of inflationary expenditures is not its only effect. As the new money is absorbed into the system, money incomes will rise. As individual incomes will not increase in the same proportion, there will take place a transfer of income between classes. Again whether the wage-earning population will in this manner give up more than it would or should under non-inflationary levies, will depend on the rate of progression which would obtain under a non-inflationary tax system, the loss of real income under the inflationary process, and on the other levies made on the wage earners while inflation takes place. We can be fairly certain, however, that bondholders, salaried workers, and pensioners lose more under the inflationary method than they would under non-inflationary war finance. Professor Clark has estimated that during the World War the salaried groups in the United States gave up some 4 billions in purchasing power in 1917-19

over and above their contribution in taxes and war loans and a further 2 to 3 billions by 1922.[5] The greater the rate of inflation the greater will be the expropriation of the middle classes, ultimately not only of their income but of their property as well.

When inflationary funds are obtained by borrowing there is a further consequence which requires notice. If we look upon the income transferred from fixed income recipients to entrepreneurs as the sum out of which the war expenditures are met, then the entrepreneurs get income-yielding assets, not only for their own contribution, but for that of other classes as well.

It is also necessary to note at this point that large-scale borrowing is itself likely to promote monetary expansion. Even if the central bank had both the power and inclination to maintain monetary stability, war will subordinate its own policy to that of the treasury. Treasuries are reluctant to raise too much by taxation or by borrowing. The solution of this dilemma during the World War was to raise approximately one third by taxation and two thirds by borrowing. This was as good a showing on the taxation side as that made by any other country, and better than that of most. But treasuries are reluctant to pay high rates of interest, both because of the increased monetary cost of waging war and because of the adverse effect of high interest rates on institutions with large holdings of fixed interest-bearing assets. An appeal is therefore made to banks to make their resources available to government and short-term interest rates are kept low to encourage individuals to "borrow and buy." In 1917-18 the issue of private long-term securities was discouraged, but low short-term rates fostered borrowing at banks for both public and private use.

During our participation in the World War this pressure to monetary expansion to be expected from large-scale government borrowing, was kept in check by direct control over the prices of much of the government's purchases, by a system of priorities discouraging investment, and by intensive Liberty Loan campaigns. The exhortations to borrow and buy during the loan campaigns were to some extent neutralized by parallel exhortations to save. Hence, while the volume of bank money was doubled during the period 1914-20 and the level of wholesale prices more than doubled, the rate of increase of both during our actual participation in the war was less than either that during the interval of our neutrality or that of the postwar boom.

When we turn to consider the incidence of war expenditures that are non-inflationary in character we must note first the well-established principle that of the revenue raised the bulk should come either from taxes on income which is directly due to the war or from a general progressive income tax on all income recipients. There is no more justification for indiscriminate levies of the type imposed during the Civil War in wartime than there is in peacetime. In so far as special excise duties are levied the objec-

[5] J. M. Clark, *The Economic Costs of the War to the American People,* p. 137.

tive should be not the raising of revenue or discouraging consumption of luxuries, but making available for war uses resources peculiarly adapted for such purpose. Beyond this some decision must be made with respect to the amount to be raised by revenue and the amount to be obtained through borrowing. Considerations of equity do not help us very much in making this choice. It is true that over long periods the poor can contribute more than during short periods, but so also can the rich. We can invoke no absolute standard which will enable us to decide whether the poor should contribute more than they can contribute during the duration of the war. Whether they will in fact do so with a given amount of borrowing depends not only on the tax system during the war, but on that prevailing after the war as well—assuming that it means something to speak of the incidence of taxation on income recipients over say a generation.

The choice between borrowing and taxation must be made on other lines. In the main the ability of any citizen to contribute to the war effort in taxes or in loans is related to his current income. During the war very high rates of taxation can be imposed with very slight, if any, adverse effects on output and employment. Tax receipts will be more "appreciated" during a war emergency than during ordinary times. The state can therefore raise practically all of its requirements by the issue of tax receipts, being limited only by the essential requirements of the population and the necessity of leaving some differentials in income. It should subordinate its borrowing to taxation because of the problems created by the existence of a large public debt. This requires even more emphasis than it received during the World War in consequence of the recent weakening of the traditional opposition to large state debts.

In proving that the cost of any war cannot be shifted on to a future generation economists have in fact proved too much. This and the theory of deficit financing in the present decade have led to a too widespread belief that the size of the public debt is not a matter of great importance. It is no doubt true, though not very significant, that the larger the debt and the larger the interest payments required, the larger will be the income out of which taxes can be paid. The real problem associated with a public debt is that of transferring income from income recipients as a whole to those in possession of the public debt. The larger the debt, interest rates remaining the same, the larger will this transfer problem loom in the postwar period. (Those who assume that private enterprise can no longer provide the necessary investment opportunities to give full employment can fall back on the contention that not only is it unnecessary to repay the principal of the public debt, but that interest payments can also be met by further borrowing.)

The existence of a large public debt will necessitate higher tax rates all around. These will affect employment and output in two ways. Disregarding

the influence of progressive taxation on the volume of savings, high rates will affect adversely the volume of employment and output by deterring entrepreneurs from undertaking risky investments. It is only because under war conditions full employment may prevail even in the absence of investment in untried fields that this influence may be disregarded. Moreover, the existence of a large fixed charge on the revenue of the state will result in a more widespread resort to pay roll and excise levies as a means of meeting the steadily growing obligations which are being imposed on the state. Such levies will affect adversely the volume of employment even more directly than will high rates of income taxation. Alternatively the existence of a large standing charge on the revenue of the state will impede the use of taxation as a method of equalizing the distribution of income.

The advocates of deficit financing during periods of unemployment have rightly pointed out that the public debt thereby created is accompanied by the creation of income which would otherwise not exist. To some extent it is also true that income yielding assets are created at the same time. Should war be commenced at a period when there is a large volume of unemployment similar reasoning might be applied to the financing of war expenditures by public borrowing until full employment is restored. We should however give further consideration to the substitution of central bank credit for public borrowing in order to avoid both the payment of interest and the postwar transfer of income. The opposition to the creation of money by the state rests on the fear that the state will not exercise the necessary restraint, and that private banks will compete with the state in the creation of money, using the money created by the state as reserve. The latter difficulty can, however, be overcome by applying the principle of Peel's Act to the deposits created by the central bank for government war expenditures. It would not be difficult to fix the volume of deposits as of a given day or average of days, thus doing away with any excess reserves which may exist when war is declared, and to require that against new deposits acquired as the government deposits are expended corresponding reserves should be kept. This, incidentally, also merits consideration if we abandon the attempt to prevent inflation. If we are to have inflation we might as well have it in a direct form without the intermediary of public borrowing.

III

Finally I may advert to an influence of monetary policy which is somewhat indirect. All wars require the economizing of all goods and services normally consumed. In a future war we must give some consideration to economizing the use of authoritarian control, this not so much because it has alternative uses but because the supply of good control is very limited, and because its utilization may accustom us to accept it after the war is over. Much of the impetus back of the movement to impose war controls is de-

rived from the acceptance of the view that war inflation is inevitable, that administrative control is necessary to prevent too great a rise in the cost of living, the expropriation of the middle classes, and profiteering. In the last war the Fuel Administration and, more particularly, the Food Administration were organized largely for these reasons. If we can prevent inflation by monetary means, we may forego, some at least, of the authoritarian controls that might otherwise be imposed.

ROUND TABLE ON THE ECONOMICS OF WAR

CHARLES O. HARDY, *Chairman*

The discussion at this round table was devoted to the papers presented at the morning session on the economics of war and to a paper read by Mr. S. v. Ciriacy-Wantrup (which follows the summaries of the discussion). Herbert Zassenhaus, Gerhard Colm, Herbert Stein, Michael Heilperin, Frederick Strauss, and Lewis L. Lorwin participated in the program and the first three have contributed summaries of their remarks.

HERBERT K. ZASSENHAUS: I concur with Dr. Heilperin as to the following points:

1. The insufficiency of Professor Dickinson's evidence that the decline phase of Kondratieff's cycles is due to war.
2. The impossibility to share in Professor Dickinson's gratification over our inability to furnish precise proof for economic propositons.
3. The overstress by Dr. Pollock on the future influence of what he calls a "preparedness economy," and the care necessary in treating this type of economy as a completely new and not long-grown phenomenon. (Dr. Lorwin made a similar point.)
4. The relative insignificance of such discussions of "value problems" involved in assessing the cost of wars as were presented by Professor Knight.

A few points may be suggested in connection with Mr. Director's paper, by way of a qualification of the importance of war financing.

1. I should emphasize more strongly than he has that the contraposition inflationary and non-inflationary war financing is not identical with the contraposition financing with taxes and financing with loans. The supposed good effects of taxation cannot be accredited to non-inflationary financing, nor the supposed bad effects of loan financing to inflationary financing, nor vice versa. Taxes, if not adjusted so as to prevent their payment (directly or indirectly) out of borrowed funds, can be as inflationary in their effects as loans financed through an instrument which is a close substitute for money.
2. As Mr. Director indicated, postwar deflation is largely independent of war financing, just as there may very well be a war inflation which is independent of how the war is financed. The monetary concomitants of the shift to or from war production will play a major part in such war inflation or postwar deflation.
3. As neither taxes nor loans nor a combination of both is likely to be sufficient to divert resources to war purposes, price and investment control will probably be unavoidable, especially if the war should hit the country at near-boom times (as in England now). And the policy followed in this regard rather than war finance will account for what government controls remain after the war.
4. The strongest case for taxation rather than borrowing rests on the adverse distributive effects of loan financing during the war (if inflationary, from

fixed to variable incomes) and after the war (from the public to the bondholders), and on the monetary effects of unwise postwar debt management.

GERHARD COLM questioned Mr. Dickinson's attempt to interpret the Great Depression as an aftermath of the World War. He doubted whether the expansion of the war period—outside the fields of agriculture, shipping, and a few special fields of industry—really resulted in malinvestment to a very substantial extent. He suggested that the World War, in its effect on most industries and also international trade, mainly speeded up trends which were already observable before the war. The World War accelerated the development of a "maturing" economy. The investment backlog of the war period, such as in housing, as well as most of the bad investments, except in agriculture, were absorbed in the first five postwar years. It is true, the capital destruction in Europe induced an extraordinary capital export which was one of the factors delaying the appearance of the phenomenon of oversaving. That a great portion of the international capital transactions of the postwar period was of a short-term nature added, as did other factors, to the sensitiveness of the economic system and facilitated the spreading of the depression from country to country. Mr. Colm concluded that the effects of the World War modified the developments of the last fifteen years but can be regarded neither as the prime cause of the boom of the 1920's nor of the depression of the 1930's. He interpreted the Great Depression as resulting from difficulties inherent in the transformation of an economy of high speed expansion into an economy of high level consumption. This process does not fit into any of the long-wave theories and calls for a very determined economic and fiscal policy, not for a mere waiting for the next upturn of the wave.

HERBERT STEIN: The economic aftercosts of war discussed in the papers presented fall into two general categories. First there is the diminution of postwar production which may be attributed to the war's effects upon the supply of resources, physical and human. Second, there are the costs of underemployment of resources which have at times in the past been associated with the aftermath of war. It is this second type of cost which bulks large in the long-wave theories which find war to be the upper turning point and which accounts for most of the postwar deficit in output discovered by Dr. Dickinson. Yet if we look for the connecting links between war and postwar depression we do not find them in the military or even the economic necessities of warfare. In part these links are found in the choice of methods for conducting the war. It is apparent from Mr. Director's paper that in the past we have made the choices which are not only most dangerous for postwar prosperity but also least efficient for the prosecution of a war. In part the postwar slump has been the economic consequence, not of the war, but of the peace—both the terms of the peace treaty and the domestic policies pursued during peace. As Professor Knight points out, war and peace may be made to fit into the cycle theories of Hawtrey or Hayek or Cassel, but this is only so if war and peace are defined to include inflation and deflation. Parenthetically, it does not seem likely that war and peace, however defined, can be brought to fit simultaneously into the theories of Hayek and Cassel.

Of course, it is possible that the relation between war and depression is psychologically, if not logically, necessary. Finance ministers and monetary authorities may always act as they have been known to act. But there is now some evidence that even this relation has been weakened. Some of the legal and conventional inhibitions to a monetary policy have expired in the course of the last two decades, and while this is no assurance of a rational monetary policy it at least opens the door to rationality. The numerous exposés of recent years have built up a strong national sentiment against war profits which might be enlisted in support of a tax program. The fiscal policies already adopted in the belligerent countries indicate a greater determination to avoid inflation than was felt twenty-five years ago. There is also the more gloomy prospect that peacetime economy of the future will resemble wartime economy more than has been true in the past, and that the aftercosts of war will be measured in the greater perversion of employment to the service of the armed state rather than in unemployment. This does not mean that the avoidance of postwar depression in the future is certain or even highly probable; it merely suggests that the pattern of the Kondriatieff may not inevitably be associated with future wars. While we are certainly not justified in optimism, it would be dangerous to underestimate the importance of the decisions currently being made in the capitals of the world.

Little attention has been given today to an aspect of the war problem which is of special concern to the United States. What are likely to be the costs of the war to the United States acting as the chief neutral supplier of materials for the belligerents? For our current export surplus we shall receive payment, although it has been questioned that the gold which we may expect to receive will constitute payment in any important sense. The character of the postwar economy is of course difficult to predict but it would not be surprising if Mr. Chamberlain's postwar utopia contained a prominent monetary role for gold. In that case we should be able to receive payment in goods if we are willing to do so. But even without contemplating a future gold outflow it is not clear that the employment of labor in the indirect production of gold is an inferior substitute for idleness or some of our make-work projects.

The major cost to which the United States is exposed as the neutral source of supplies is the postwar depression. Since we were in a state of depression before the war began, it may not be proper to say that the war presents the danger of a new depression. It would be more accurate to say that the war will give us a level of activity which is higher than we would otherwise have achieved but which will be especially difficult to maintain. Our ability to maintain the war level of activity after peace returns will depend in large part upon our own policies, upon our ability to make use of the opportunity provided by rising activity to eliminate some of the sources of rigidity in the economy, upon the vigor with which monetary and fiscal steps are taken to prevent a reduction in spending when the war ends, and upon our willingness to make the concessions in our international economic position which would be helpful in restoring world trade and international investment.

FRANK G. DICKINSON: I appreciate the criticisms that have been given, especially because I am working on a longer manuscript of the "Aftercost of the World War to the United States." Mr. Colm was the only one who touched upon my explanation of the 1920's; the rest discussed primarily my explanation of the 1930's. It strikes me that if this absence of criticism of my treatment of the 1920's indicates acceptance thereof, then I can argue that if Long Cycle III explains the 1920's, it must also be accepted as an explanation of the 1930's.

Mr. Strauss in his remarks stated that I was in disagreement with Professor Schumpeter. Without giving chapter and verse, Mr. Strauss asserted that Schumpeter believed that production expanded rather than contracted in the long downswing of the long cycle. I am unable to find any such statement in the writings of Schumpeter, and would appreciate a citation. I fail to find in Schumpeter's studies any serious attempt to demonstrate the existence of the long cycle; rather, Professor Schumpeter accepts Kondratieff's inadequate evidence. I would call Mr. Strauss' attention to my attempt actually to measure one long cycle.

Mr. Heilperin objected to the defeatism involved in the argument that, given the World War, the depressed 1930's were inevitable. Mr. Heilperin also implied that for the most part I had overlooked the tragic social, political, and economic mismanagement since the World War. I would make two answers to Mr. Heilperin's arguments. First, the long-cycle concept involves no more defeatism than the short-cycle concept, which predicates that depression must follow prosperity. Second, I would say that whenever human beings become so perfect as to avoid the errors of peace, they will also be too wise to wage wars in the first place.

THE RELATION OF WAR ECONOMICS TO AGRICULTURE WITH PARTICULAR REFERENCE TO THE EFFECTS OF INCOME AND PRICE INFLATION AND DEFLATION

By S. v. CIRIACY-WANTRUP

I

The concept, "war economics," comprises all economic effects of preparation for war, of war itself, and of postwar adjustment. War economics is a problem for neutrals and belligerents alike.[1]

It is commonplace to say that each individual war has been different with respect to its economic effects. Since it is impossible within the limited time available to approach the subject assigned historically, the discussion must be confined to those economic effects of war which are of sufficiently general nature—at least in an economy based on monetary exchange—to allow abstraction from the historical peculiarities of individual wars and to arrive at statements about the relation of war economics to agriculture which are to some extent independent of time and place. By far the most important of these general economic effects of wars has been inflation followed by deflation of aggregate money incomes and of the general price level. For this reason the effects of inflation and deflation upon agriculture have been selected as the central theme, although there are, of course, other general effects of war economics upon agriculture.

Why and how wars have had inflationary and deflationary effects can only be touched upon here. In a monetary exchange economy no major war has been financed entirely out of taxation or voluntary contributions. Ordinary methods of taxation are too slow. Psychological and political considerations and fears of disorganizing private enterprise stand in the way of too severe tightening of the tax screw. Moreover, the resources of foreign contries cannot be tapped by taxation. For all these reasons the state always seeks credit, usually enforcing its appeal with pressure, which ranges all the way from appeals to patriotic sentiment to direct compulsion. The existing restrictions on credit are invariably broken down. Monetary authorities and private banking systems become servants of paramount fiscal needs. Fiscal inflation leads to inflation of aggregate money incomes if credits for nonessential production are not correspondingly curtailed. The latter is theoretically possible, always attempted, but as yet never accomplished.

Inflation of aggregate money incomes must involve price inflation if the former is not due entirely to the employment of previously unemployed factors—

[1] War economics may be influenced by, but does not include, the economic causes and the economic objectives of war. In a world of economic nationalism, natural limitations on agricultural production, for instance, may be a contributing cause of wars and may determine military objectives. These important aspects of the relation of war and agriculture are not strictly within the boundaries of the topic under discussion. One has also to differentiate clearly between war economics and economic warfare. The latter is a problem of economic strategy, and not of economic effects of war. In "total" warfare the two concepts may become synonymous for some countries, but for other countries and for the world as a whole problems of economic warfare normally form a small part of the problems of war economics.

assuming infinite supply elasticities of these factors and sufficient supply of limitational factors—or, in a fully employed economy, if hoarding is not correspondingly increased. Increases of aggregate money incomes are scarcely ever confined to the employment of previously unemployed factors. Even if they were, price increases would occur, but they would be of short-run nature. Because of shortage in limitational factors, increases in production are usually halted before all unemployed factors have been employed. It takes time until such bottleneck obstacles have been overcome. Increase of hoarding with increasing aggregate money incomes and increasing prices is unlikely theoretically and has not yet been experienced practically.

After the end of a war, fiscal inflation continues for some time because of demobilization and reconstruction needs. War is generally followed by a short period in which inflation of aggregate money incomes and prices is as great as during the war, or even greater. Fiscal deflation directly or indirectly, through its anticipation, brings about the collapse. Disappearance of fiscal credit needs makes possible the re-establishment of the artificial limitations on the expansion of credit which had been set aside during the war. This leads to more stringent conditions for private credit. Private enterprise is further discouraged through increases in taxation to service and amortize public war debts. The attempt to amortize war debts discloses the character of wartime investment. Under peace conditions debts are incurred by entrepreneurs to purchase or manufacture quasi-permanent goods under the assumption that the social product will be increased enough to cover interest and amortization. Under war conditions debts are to a large extent incurred not to increase the social product but to destroy it. Decrease of fiscal investments, more stringent conditions for private credit, increased taxation, and decreased ability to meet the tax burden combine to create a situation in which fiscal deflation is not only not counteracted but is augmented by the developments in private industry, with resulting deflation of aggregate money incomes and prices. Such a condition generally favors hoarding so that a vicious circle is set in motion.

This short sketch of wartime inflation and deflation must suffice because we are not concerned here with the causes of these phenomena, but with an analysis of their effects upon agriculture. Such an analysis can be accomplished best by comparing the reaction of agriculture with that of nonagricultural industries under the impact of income and price inflation and deflation. Differences between the behavior of agricultural and nonagricultural prices are often explained either by differences in demand for products of the two economic sectors or by pointing to the competitive market organization of agriculture as contrasted with the monopolistic conditions in industry. Unsound statements are often made about the reasons why during so-called "depressions" supply in agriculture as compared with supply in nonagricultural industries is maintained on a higher level. All these supposed differences between agriculture and other industries are extremely important in war economics and can be tested by a comparative study of the inflationary and deflationary aspects of war economics in agriculture and in nonagricultural industries.

That inflationary and deflationary tendencies in the flow of aggregate money incomes and in the general price level are not caused by wars alone needs

scarcely be emphasized. Wartime inflation and deflation are not in all respects identical with peacetime inflation or deflation, but reveal the same differences and similarities between the reaction of agriculture and other industries. These differences and similarities will be dealt with here. They characterized the three long periods of agricultural depression and industrial stagnation which have occurred since the end of the nineteenth century, and, they can also be observed during shorter fluctuations of aggregate money incomes and prices; for instance, during the business cycle.

II

As a background for an analysis of the behavior of agriculture and other industries with respect to price inflation and deflation, it may be well to glance at the relative movement of agricultural and nonagricultural prices during the periods of price inflation and deflation which occurred during the last 150 years. They are discussed for four major countries in detail elsewhere.[2]

The effects of inflation and deflation upon the purchasing power of agricultural products in terms of nonagricultural products and services need particular attention since Kondratieff's well-known thesis,[3] namely, that the agricultural components of the wholesale raw material price level show a more abrupt and greater fall in the downswing of prices and a more abrupt and greater rise in the upswing than the industrial raw material prices, is not entirely correct. With a few exceptions, particularly in the United States during the last downswing period, industrial raw material prices as a whole proved more sensitive than agricultural prices as a whole.

The purchasing power of agricultural products in terms of products used in computing the wholesale price level did not show the postulated parallelism of movement with the absolute movement of wholesale prices.[4] On the other hand, the purchasing power of agricultural products in terms of finished industrial products and of services bought by farmers closely corresponded to the fluctuations of the general price level. It is this latter purchasing power, which in conjunction with the relative volumes of production, determines the economic position of agriculture relative to other industries.

Considerable differences appeared in the movement of purchasing power of individual agricultural products. Grain prices, for instance, and the prices of agricultural products used as industrial raw materials, like fibers and oils, showed the same violent movements as industrially produced raw materials. Finished agricultural products, on the other hand, like animal products and those agricultural products which leave the farm in a state of manufacture ready or nearly ready for consumption, showed a price movement more nearly like that of finished industrial products.

[2] S. v. Ciriacy-Wantrup, *Agrarkrisen und Stockungsspannen zur Frage der langen „Welle" in der wirtschaftlichen Entwicklung* (Berlin, 1936).

[3] N. O. Kondratieff, "Die langen Wellen der Konjunktur," *Archiv f. Sozialwissenschaft und Sozialpolitik,* 1926, Vol. 56, No. 3. Translation: "The Long Waves in Economic Development," *Review of Economic Statistics,* Vol. XVII, No. 6, November, 1935, pp. 105-115.

N. O. Kondratieff, "Die Preisdynamik der industriellen und landwirtschaftlichen Waren," *Archiv f. Sozialwissenschaft u. Sozialpolitik,* 1928, Vol. 60, No. 1.

[4] Cf. S. v. Ciriacy-Wantrup, *op. cit.,* pp. 25-39, 110-127, and 181-197.

During price inflation and deflation the causes of the changes in price ratios between agricultural and nonagricultural products as a whole and between individual agricultural and nonagricultural products cannot therefore be found in the fact that a given price series belongs to agriculture or to other industries. It is the purpose of the following discussion to analyze these causes and to show in what way and how far they bring about differences in economic position between agriculture and nonagricultural industries in the course of income and price inflation and deflation.

III

For products of individual industries changes in aggregate money incomes become manifest as changes of demand and supply.[5] Our task may be divided, therefore, into two parts; first, into tracing the effects of aggregate money income changes through demand and, second, into tracing them through supply.

Differences in the influence of changes in aggregate money incomes upon prices through demand depend, first, on the relative magnitude of changes in position and shape of demand schedules and, second, on the existing price elasticities, in the sense of arc elasticities, of the same schedules.[6]

Before a comparison between agriculture and industry is made in these two directions, it may be well to emphasize that that portion of agricultural production which is consumed on the farm is affected somewhat differently by changes in, and by price elasticities of, market demand than the marketed portion of production.[7] For this portion, schedules of marginal utility to the farmer take the place of market demand schedules and are directly compared with the schedules of marginal costs. In the absence of substitution, the schedules of marginal utility of farm-consumed agricultural products may be regarded as constant and rather inelastic. It is, of course, not quite correct to disregard substitution entirely. There is a well-defined trend in world agriculture towards substituting purchased goods more and more for goods produced on the farm.[7] Always, the marginal utility of goods produced for consumption on the farm is compared with the marginal utility of money which may be obtained from their sale. Changes in the latter are not independent of changes in the aggregate money incomes of the entire economy. However, changes in aggregate money

[5] Why they appear as changes of demand is obvious. They appear as changes of supply because aggregate money incomes must be equal to aggregate money costs, including profits. This must lead to changes in prices of cost factors, assuming the "state of the arts" unchanged.

[6] In using the term elasticity we shall hereafter refer to arc elasticity. For our comparisons arc elasticity is more useful than point elasticity in spite of the more general theoretical validity of the latter concept. But it goes without saying that elasticity at different points of an arc under consideration is usually different.

In the subsequent comparisons between changes in prices and changes of demand and supply of different products or groups of products relative amounts of changes are meant.

[7] Cf. S. v. Ciriacy-Wantrup, *op. cit.*, pp. 88-95. The quantitative importance of farm-consumed agricultural products varies greatly with time, kind of goods produced, and size of farms. For the first half of the nineteenth century in Western and Central Europe as a whole it amounted to around 55 per cent of total agricultural production. At the present time it may have decreased for Western and Central Europe to around 25 per cent, and in the United States to around 20 per cent. Differences in estimates are mainly caused by differences in valuation. Bases of evaluation are usually wholesale prices. This tends to understate the true value of this portion to agriculture. From a certain level of consumption onward the economic alternative is not selling at wholesale but purchasing at retail.

incomes influence the prices received and the utility of money obtained per unit of good sold, in opposite directions. The net effect upon substitution of home consumption for sales, and vice versa, may therefore be noticeable for individual farms—particularly if fixed charges affect the marginal utility of money. But the effect is negligible for agriculture as a whole. The portion of farm-consumed agricultural production renders agriculture proportionately immune to the effects of changes in aggregate money incomes. A second important difference between agriculture and industry connected with the portion of agricultural production consumed on the farm will be taken up later when the effects of changes in aggregate money incomes through supply are discussed.

As an index of differences in relative magnitudes of demand changes caused by changes in aggregate money incomes, one may take differences in income elasticities of demand.[8] Differences in income elasticities may be said to be dependent on five factors: First, is market demand for a given good directly or indirectly determined by income. In the short run, at least, consumer's, producer's, and trader's demand may be influenced in different degrees by changes in aggregate money incomes. The second factor is the position of a given good in the preference scale of final consumers at constant or equiproportionally changing prices.[8] Third, whether or not complementary or competitive relationships prevail for a given good. Fourth, the extent to which demand for a given good is influenced by changes in income distribution associated with changes in aggregate money incomes. Fifth, the extent to which the demand for a given good is influenced by the rate at which income changes take place, by the direction of income changes, and by anticipated changes. Only a short, generalized comparison of the first four factors in agriculture and in nonagricultural industries is possible here. Studies of the fifth factor do not as yet permit such a comparison.

1. Many agricultural products are industrial raw materials. With regard to these the effects of changes in aggregate money incomes are the same for agriculture and other industries which produce raw materials. The details of these complexities are irrelevant here. Trade capital plays an important role in the demand for agricultural products. Hawtrey's analysis of the effect of producer's and trader's demand upon price fluctuations through changes in inventories and stocks and Wicksteed's analysis of "reservation demand" are of particular importance to agriculture.[9] Grains, fibers, fats, and hides are noteworthy examples.

[8] Elasticity of demand with respect to income will be designated briefly income elasticity of demand. (Income elasticity $= \eta i = \frac{dx}{x} \Big/ \frac{di}{i}$; price elasticity $= \eta p = \frac{dx}{x} \Big/ \frac{dy}{y}$; x = quantity taken; i = money income; y = price per unit.)

Income elasticity of demand is a concept which, in the same way as price elasticity, is applicable to individual demands and to market demand. Income elasticity of demand has no direct reference to price. In computing income elasticities of individual demand, prices are assumed constant; changes in money income and real income are the same. If income elasticities of market demand are under consideration, prices of the good under consideration as well as of all goods cannot be assumed to remain constant but have to be assumed to change equiproportionally. The latter assumption is neither more nor less correct theoretically than the assumption that all prices remain unchanged if price elasticity of market demand is studied.

[9] R. G. Hawtrey, *Trade and Credit* (London, 1928), and *Capital and Employment* (London, 1937), particularly Chap. V.

2. It is usually assumed that agricultural products have a place of priority on the preference scale of final consumers and that changes in income do not affect them as much as most nonagricultural products. It is true that certain foods, for instance, bread, the cheaper fats, and in Central and Eastern Europe potatoes, have a very low positive or even a negative income elasticity for this reason. On the other hand many animal products, fruits, and vegetables have an income elasticity which approaches or exceeds unity. The income elasticity of animal products affects the income elasticity of bread grains and potatoes because the demand for the latter is partly derived demand through the demand for animal products. The conversion losses in feeding range from 70 to 95 per cent of calories and proteins. Furthermore, as implied above, the demand for bread grain on the farm is determined in the short run by the actions of the trade and not by the actions of the final consumer.

3. As far as consumers goods are concerned, effects of complementarity and competitiveness are taken into account under factor two. As far as producers goods are concerned very little is known about this point. There is no a priori reason why complementary or competitive relationships should prevail more in agriculture than in other industries.

4. Several studies of income tax statistics seem to indicate that concentration of income tends to increase if aggregate incomes rise and to decrease if aggregate incomes fall.[10] "Inequality" seems to be greater in prosperity than in depression. Computation of slopes of Pareto curves[11] by Crum[12] and by Polak,[13] both for the United States, and recent studies of the movement of real and money wage rates in the United Kingdom[14] point in the same direction. Equalization of income would favor agriculture in relation to nonagricultural industries because it is known from many consumption studies in various countries that consumers in the lower income ranges have higher propensities to consume agricultural products relative to industrial products than do consumers in the higher income ranges.[15] However, changes in income distribution according to size of income during recent booms and depressions studied seem to be slight.[16]

P. H. Wicksteed, *The Common Sense of Political Economy* (London, 1933), Vol. II, Chap. IV ff.

[10] Rufus S. Tucker, "The Distribution of Income Among Income Taxpayers in the United States, 1863-1935," *Quarterly Journal of Economics*, Vol. 52 (August, 1938), No. 4, pp. 547-587.

Robert F. Martin, *National Income in the United States, 1799-1938* (New York: National Industrial Conference Board, 1939).

W. I. King, *The National Income and Its Purchasing Power* (New York: National Bureau of Economic Research, 1938).

W. I. King, O. W. Knauth and F. R. Macaulay, *Income in the United States, Its Amount and Distribution, 1909-19* (New York: National Bureau of Economic Research, 1922).

[11] Cf. Vilfredo Pareto, *Cours d'economique Politique* (Lausanne, 1897), Book 3, Chap. 1.

[12] W. L. Crum, "Individual Shares in the National Income," *Review of Economic Statistics*, Vol. XVII (November, 1935), No. 6, p. 127.

[13] J. J. Polak, "Fluctuations in United States Consumption, 1919-32," *Review of Economic Statistics*, Vol. XXI (February, 1939), No. 1, pp. 1-12, particularly Appendix B.

[14] John T. Dunlop, "The Movement of Real and Money Wage Rates," *Economic Journal*, Vol. XLVIII (March, 1938), pp. 413-434, and "Trends in the Rigidity of English Wage Rates," *Review of Economic Studies*, Vol. VI (June, 1939), No. 3, pp. 189-199.

[15] Cf. *Consumer Expenditures in the United States* (Washington: National Resources Committee, 1939). Section 6 gives literature and comparisons with previous studies.

[16] Crum investigates changes in income distribution in the United States between 1927

Moreover, all available studies of changes in income distribution neglect changes in the lower income brackets and the effects of unemployment. If these are taken into account it is doubtful if changes in income distribution associated with changes of aggregate incomes have a noticeable influence upon consumption.

On the basis of these generalizations, one may conclude that differences in the relative income elasticities of demand between agricultural products as a whole and nonagricultural products as a whole are much less than is generally supposed.

We may now ask whether there are differences between agricultural and nonagricultural industries with respect to price elasticity of demand.

Price elasticity is partly influenced by the same factors—*mutatis mutandis*—as income elasticity. In fact, one may look upon price elasticity of demand as consisting of two parts, one being income elasticity and the other elasticity of substitution.[17] Additional factors are the number of uses to which a given good can be put and the importance of the expenditure for a given good relative to consumers' incomes. The latter are, of course, assumed constant in considering price elasticity. It is the combined effect of all factors mentioned that determines differences in price elasticities, and not whether the good is produced by agriculture, mining, manufacturing, or other industries. There are products with high price elasticity in agriculture and products with low price elasticity in other industries.

Numerous studies have attempted to measure demand elasticities for agricultural goods. A summary of those studies in a recent text shows elasticities for nineteen different goods.[18] Elasticities for the most important agricultural goods are below unity, but range from 0.07 to 2.56, and vary considerably for each good within different periods and regions. Comparable computations for a large number of industrial goods do not exist. The meager data available for some important industrial goods point to elasticities below unity—for instance, with

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and 1932, and concludes: "Despite the violent cyclical change which took place during this six-year interval, the degree of inequality experienced no appreciable change." *Op. cit.*, p. 121.

[17] Cf. also: J. R. Hicks and R. G. D. Allen, "A Reconsideration of the Theory of Value," *Economica*, February, 1934, pp. 52-76, and J. R. Hicks, *Value and Capital* (Oxford, 1939).

The relation of the factors mentioned above to price elasticity has received far too little attention. The case of producers goods is discussed by Roswell H. Whitman, "The Problem of Statistical Demand Techniques for Producers' Goods: An Application to Steel," *Journal of Political Economy*, October, 1934, pp. 577-594.

Cf. also: Don D. Humphrey, "Price Reduction as a Stimulus to Sales of Durable Consumers' Goods," *Journal of American Statistical Association*, June, 1939, pp. 252-260; and Edwin B. George, "Replacement Demand for Consumers' Durable Goods," *Journal of American Statistical Association*, June, 1939, pp. 261-268.

[18] Warren C. Waite and Ralph Cassady, *The Consumer and the Economic Order* (New York, 1939), pp. 157 and 158. These measurements are often highly unsatisfactory. They are all derived from statistical demand curves. The differences between these curves and the timeless and hypothetical demand schedules of Walras ($D=f(p_1, p_2, \ldots p_n)$) or, as its special case, of Cournot-Marshall ($D=f(p)$) are often not sufficiently taken into account in interpreting actual market conditions. The demand curve which results after the best possible "corrections" for changes in position and shape of demand and supply curves are made, still represents an average of the demand schedules which have existed during the period considered. "The" elasticity of the corrected curve represents an average for the arc considered and may not be representative for individual points.

respect to steel[19]—and to similarly great variations—for instance, between 0.65 and 2.5 for automobiles[20]—as encountered in agriculture.

The differences between agriculture and other industries with respect to changes in aggregate money incomes may now be summarized as far as the demand side is concerned. Agriculture is nearly immune from such changes to the extent that agricultural goods are produced and consumed on the farm. The effects of factors discussed as affecting income elasticities and price elasticities put certain agricultural products in the same class with certain industrial products, and differentiate them from other classes likewise containing both agricultural and industrial products. The commonly accepted notion of general, inherent differences between agricultural and industrial products with respect to income elasticity and price elasticity is erroneous.

However, there is one general difference between agriculture and other industries in relation to the effect of changes in aggregate money incomes through demand. This difference is due to the degree of monopolistic controls in agriculture and other industries. As yet, monopolistic conditions, in the widest sense, are far more frequent in nonagricultural industries than in agriculture. This, of course, cannot be called an inherent difference since voluntary cooperation and state organization have introduced similar conditions in agriculture and may do so even more in the future.

Monopolistic conditions do not influence elasticities of demand schedules. But changes of elasticity without changes of the position of the demand schedule affect price under monopoly whereas they do not under pure competition, where the demand schedule may pivot around the point of intersection with the supply schedule without affecting price. This is important here, because a decrease of demand due to a decrease in aggregate money incomes is often associated with a decrease of price elasticity. Under pure competition this leads, at least in the short run, to decreases in prices.[21] Under monopoly, however, a decrease in elasticity causes an increase in price if it is assumed that there are no changes in marginal costs. Since the same reasoning applies, *mutatis mutandis,* to an increase in aggregate money incomes, equiproportional shifts of demand of this kind lead to relatively more rigid prices for goods produced under monopoly conditions. As shown elsewhere[22] this is true particularly for producers goods. The price movements of raw materials produced in agriculture compared with price movements of raw materials produced in industry during the recent periods of inflation and deflation can to some extent be explained in this way.[23]

[19] Roswell H. Whitman, *op. cit.,* Section 2.

[20] C. F. Roos and Victor von Szeliski, "Factors Governing Changes in Domestic Automobile Demand," *The Dynamics of Automobile Demand* (New York: General Motors Corporation, 1939). Cf. also: W. I. King, "Can Production of Automobiles Be Stabilized by Making Their Prices More Flexible?" and rejoinder of Roos and Szeliski in *Journal of American Statistical Association,* Vol. 34 (November, 1939), No. 208.

[21] In the long run this is not necessarily the case if constant or decreasing costs prevail in the industry.

[22] S. v. Ciriacy-Wantrup, "Notes on the Significance of Trade, Legal, and Price Barriers in Relation to Social Progress," *Proceedings of the Twelfth Annual Meeting,* Western Farm Economics Association, 1939, pp. 139-152.

[23] Cf. above, Section 2.

IV

Factors affecting variations in income elasticity and price elasticity as well as differences in the degree of monopolistic control go a long way in explaining changes in purchasing power of numerous agricultural products during price inflation and deflation. However, they cannot explain sufficiently changes in purchasing power of agricultural products as a whole. We have next to inquire if there are peculiarities of agriculture on the supply side which may explain relative price movements and other differences between agricultural and nonagricultural industries under the impact of price inflation and deflation.

Differences in the influence of changes in aggregate money incomes upon prices through supply depend on the relative magnitude of changes in position and shape of supply schedules and on the existing supply elasticities of the same schedules.[24]

Changes in supply schedules in so far as they are determined by costs may be caused by technological changes or by changes in the prices of cost factors. There is no reason why technological changes related to changes in aggregate money incomes should affect agriculture and nonagricultural industries differently. Similarly, there can be no differences with respect to the costs of raw materials, machines, and equipment for which both agriculture and other industries compete.

However, there are differences with respect to labor cost. Wage rates for hired labor have in most countries been more flexible in agriculture than in nonagricultural industries for various reasons discussed elsewhere.[25] More important is the fact that in agriculture the entrepreneur and his family furnish a larger proportion of his labor supply than is true for most other industries. Family labor input is not determined by the movement of wage rates, but by the balance of marginal disutility of effort and marginal utility of product. The schedule of marginal disutility of effort is not changed by shifts in money incomes and may be regarded as convex to the abscissa (representing quantity of effort and quantity of product), and of strongly decreasing elasticity in its positively sloping branch. The schedule of marginal utility of product is not changed by shifts in money incomes for that portion which is consumed on the farm. However, the schedule of marginal utility of money returns is affected by price changes and by changes in the marginal utility of money. We have stated

[24] Attention should be called to the fact that the price-supply and cost-output relationships in agriculture are not strictly speaking functional but only stochastic. According to weather and other uncontrollable factors, a wide range of output may correspond to the same costs and a wide range of supply to the same price. With respect to the elasticity of supply this is of interest from two angles. First, a farmer may not become conscious of changes in price due to changes in aggregate money incomes because of the great variations in price caused by natural conditions. Second, if he realizes that changes of money income have influenced demand he may not think this important enough to change his plans—at least in the short run—since he knows that natural conditions may introduce greater changes in his output than he is willing to make voluntarily. Although these two factors tend to make supply adjustments less definite in agriculture than in industry, their effects should not be overestimated. Misinformation about the causes of price changes is not confined to agriculture but is prevalent in most competitive industries. Farmers are accustomed to use "most probable" or "normal" output figures, and make adjustments in costs on this basis "as if" they had full control over production.

[25] S. v. Ciriacy-Wantrup, *op. cit.*, pp. 28 ff., 113 ff., 185 ff., and Figure 10.

above that changes in aggregate money incomes cause changes in prices in the same direction, but changes in the utility of money per unit of goods sold in the opposite direction. In other words, if aggregate money incomes increase, marginal money returns increase, but marginal utility of money returns may not increase at all; in fact, it may decrease. If aggregate money incomes decrease marginal money returns decrease also, but marginal utility of money may not decrease at all. It may increase if the pressure of fixed charges increases the marginal utility of money to the farmer.

The magnitude of changes in supply associated with changes in aggregate money incomes is generally less in industries where self-employment prevails than where labor is hired, whether in agriculture or in other industries. But in agriculture, self-employment, self-supply of food and shelter, and relatively great flexibility of wage rates for hired labor, all combine in such a way that one may well speak of inherent differences between agriculture and other industries.

The elasticity of supply of many individual agricultural products is not less than that for many industrial products. It is the elasticities of supply of aggregates which are different. These differences can be explained by the importance of joint costs, of fixed costs, of sunk costs, and of monopolistic controls.

The great importance of joint costs in agriculture is the decisive factor in bringing about differences in supply elasticity between individual agricultural products. They likewise affect the elasticity of total agricultural supply in the short as well as in the long run. For reasons stated, the nonmarketed portion of agricultural production is almost independent of market prices. A portion of the marketed production may also be regarded as independent of price because it is a joint product of that portion which is not marketed. In countries of peasant agriculture and small farms this second factor forms an important part of the total supply which reaches the market. There are few parallels of this kind of joint cost effect in nonagricultural industries.

That agriculture is characterized by a high proportion of fixed costs to total costs is not a characteristic distinguishing it from many other industries, for instance, the public utilities and the chemical industry. But there are differences of degree. First, labor costs are variable costs in these industries whereas from a cost accounting standpoint family labor in agriculture is a fixed cost in the sense of an opportunity cost.[26] Second, in agriculture, fixities in the form of "lumpiness" are much more important than in most industries. Such lumpy costs are different from fixed costs in the degree of fixity. Fixed costs proper do not vary at all with changes of production velocity[27] over that range of production velocity which is considered. Lumpy costs are fixed over a part of the range

[26] The practical difficulties in establishing cost rates for the operator's labor on the basis of real or "pain" costs, that is, through comparison of marginal disutility of effort and marginal utility of returns (as suggested above), are so great that this theoretically attractive solution offers few possibilities in farm cost accounting.

[27] Production velocity or instantaneous speed of production is the volume of production in a very short time interval divided by the time interval. What constitutes a "very short time interval" or a "moment of time" differs greatly for different lines of production according to technological conditions; for the production of water by a well it is a second; for seasonal industries it is a day; for the production of crops it is a season; for the production of milk it is a milking period; for some industries it is a month, for others a year. A "very short time interval" is not necessarily identical with the accounting period.

which is large in relation to the whole range of production velocity considered.[28] They vary as noticeable "quanta" of costs, and, therefore, discontinuously with production velocity. Lumpy costs are particularly important for agricultural enterprises because the total range of production velocity considered is usually small in relation to the range of production velocities encountered in industrial enterprises. One laborer or one machine of a size used in agriculture does not usually represent a noticeable "quantum" of costs in industrial enterprises whereas they do in most size groups in agriculture.[29]

Fixed costs do not enter into short-run marginal costs and are therefore disregarded in the determination of short-run, individual outputs and total supply. Lumpy costs do not enter into marginal costs between the points of discontinuity of the total cost function. Within these points they must, therefore, be treated like fixed costs. At the points of discontinuity the full "jump" of lumpy costs is formally added to marginal costs. In agriculture most lumpy costs are irreversibly variable. They are variable only with increasing production velocity but resist variation with decreasing production velocity. Lumpy costs in agriculture, therefore, behave like fixed costs if production velocity is reduced.

The effect of a high proportion of fixed and lumpy costs upon elasticity of supply can only be sketched here. Let us first consider price decreases. If fixed and lumpy costs are high in relation to variable costs, the point of minimum average variable costs, that is, the point at which production would cease in an individual enterprise if prices decreased further, is far below the point of minimum average costs.[30] The magnitude of production adjustment between the points of minimum average costs and minimum average variable cost depends on the slope of the marginal cost curve. In agriculture, the slope of the marginal cost curve between these points is generally very steep for technological reasons—steeper, one may venture to say, than in most nonagricultural enterprises. Reduction of variable costs between the points of minimum average costs and minimum average variable costs has therefore a relatively slight effect upon output in agriculture as compared with other industries.

Next, let us consider price increases. In agriculture the increase of fixed factors (for instance, of land, land improvements, or bearing trees) and of some lumpy cost factors (for instance, of animals) is a slower process, for technological reasons, than in most other industries. Variable factors can be increased, of course. But here again the slope of the marginal cost curve above the point of minimum average costs is particularly steep in agriculture, and prevents large increases of production velocity with increases of variable costs.

[28] It is obvious, therefore, that the differentiation between fixed and lumpy costs depends on the range of production velocity considered. There is no general, clear-cut difference in kind between fixed and lumpy costs.

[29] There are, of course, small-scale enterprises in nonagricultural industries and large-scale enterprises in agriculture. For some California fruit ranches, for instance, one seasonal laborer is certainly not a lumpy cost factor.

[30] In agriculture, where fixed cost factors may constitute a complete economic unit, because operator's labor is to be regarded as a fixed cost, feed is produced on the farm, and fertilizer purchases can be avoided by relying on the natural increment of plant nutrients. Minimum average variable costs may be zero to the right of origin in the Cartesian system of co-ordinates. In other words, production would continue even if the input of all variable factors had ceased.

Thus far, we have dealt with fixity of costs in relation to timeless, hypothetical, short-run cost and supply schedules. For many economic problems, for instance, for determining so-called "statistical" cost and supply curves or for studying time lags in adjustment of costs and supply to price changes, the extent of fixity in costs over time is important. It can be shown that the dimension of time is implicit in the differentiation between fixed and lumpy costs on the one hand and variable costs on the other. As mentioned above, the dimension of range of production velocity is explicit in the differentiation between fixed, lumpy, and variable costs. If the time dimension of fixity is considered, fixed costs proper and lumpy costs may both be discussed under the concept of "sunk costs." The term sunk costs has the further advantage that it may include variable costs if fixity of costs during a single production interval is considered.[31] This is of practical importance if changes of production velocity are to be made during the production interval, as often happens in those industries in which the production interval is fairly long. Sunk costs are not a peculiarity of agriculture, but they are of greater importance in agriculture than in most industries because of the long production interval in agriculture.[32]

A high proportion of sunk costs affects lags in adjustment of supply over time in the same way as a high proportion of fixed costs affects the elasticity of timeless (short-run) supply schedules. Sunk costs likewise are disregarded in adjusting production velocity. Additional variable costs, which in this case may be called "recovery costs," are expended until their marginal unit is equal to the marginal unit of revenue obtained by expending them. The same argument as above could be repeated with the difference that the term minimum average recovery costs needs to be substituted for minimum average variable costs. The argument is quite obvious for existing sunk costs; that is, for decreases of prices. If prices increase, new expenditures which will become sunk cost are undertaken if the new production velocity is expected to last for a sufficiently long period to make full economic use of the unexhausted productive capacities of sunk cost factors, or, in other words, to amortize the investment. Even then the technological time lag in adapting sunk costs, as far as they are fixed and lumpy costs, and the time lag caused by the long production intervals of agriculture remain. Lags in supply adjustment caused by sunk

[31] By production interval is meant the time which elapses between the employment of variable cost factors and the output of the product for the production of which the variable factors were employed. The term production interval is chosen in order to avoid the lengthy controversies which have arisen out of the use which the Austrian school, and particularly Böhm-Bawerk, Strigl, Hayek, and others have made of the term period of production in capital and business cycle theory. The concept production interval as used here is quite independent of the criticism which has been raised by F. H. Knight and others against the concept period of production. The existence of durable capital goods and the problem of roundaboutness of production are technical data for the length of the production interval. But they are excluded from the definition of the production interval, whereas they form the central issue in the definition of the production period. The beginning and the end of a production interval can be clearly and easily ascertained by timing the employment of variable cost factors, particularly in those industries like agriculture, in which the processes of production are largely discontinuous.

[32] One year in crop production; from one to four years in livestock production, if breeding stock is not increased; from two to eight years, if breeding stock has to be increased in order to increase market supply; and from eight to ten years in the production of bearing trees.

costs not only appear in connection with so-called "cobweb" phenomena[33] but are also important for the lag in gradual supply adjustment to price changes brought about by changes in aggregate money incomes.

The last factor which may introduce differences in elasticity of supply between agriculture and other industries is the degree of monopolistic control. Monopolistic conditions do not in themselves make supply elastic any more than they make demand more elastic. The marginal cost schedule is a datum for the monopolist. He has to move along it if he wants to maximize profits. However, the existence of monopoly gives him the opportunity to deviate from the marginal cost schedule. A monopolist may rightly or wrongly believe that it is in his interest to stabilize prices as an aid in oligopoly arrangements or in maintaining retail prices.[34] This would mean that every change of demand is countered by an opposite change in supply as long as average costs are covered. Monopoly output would be more elastic than would market supply under pure competition, with the exception of an industry working under constant costs.

It is apparent, then, that there are differences partly in kind and partly in degree between agriculture and nonagricultural industries in the field of labor organization, cost structure, and control over supply, which explain to a large extent the movement of purchasing power of agricultural products during income and price inflation and deflation. Changes of position and shape of cost and supply schedules are less in degree, elasticity of supply is less, and lags in cost and supply adjustments are more frequent and greater in agriculture as a whole than in other industries. This tends to accentuate and to extend the effects of changes of aggregate money incomes upon agriculture relative to other industries to the benefit of agriculture during inflation and to the detriment of agriculture during deflation. The disequilibrium between agriculture and other industries in purchasing power and production becomes thereby an important characteristic of income and price inflation and deflation.[35]

[33] Lags in production adjustments do not lead in themselves to self-perpetuating supply-demand disequilibria in the form of cobweb diagrams. Lags in the adjustment of supply to price occur in many nonagricultural industries. Here also the causes are largely sunk costs. But in nearly all nonagricultural industries production is a continuous flow within industrial enterprises, or at least within the whole industry. Supply is adjusted step by step, and a new equilibrium position is gradually approached. For a whole industry such an adjustment is a continuous process. Under such conditions, lags in supply-price adjustments do not create a cobweb. Only if the supply is not changed step by step, but abruptly for a whole industry, do lags in supply-price adjustment due to sunk costs create a cobweb. It is precisely this which is brought about in agriculture through natural conditions that make for uniformity in the timing of production intervals within individual enterprises and the whole industry. Exceptions are, of course, products which are produced under a wide range of climate, for example wheat. The greater continuity of agricultural production and prices is one of the most important consequences of the development of transportation during the nineteenth century.

[34] Cf. J. K. Galbraith, "Monopoly Power and Price Rigidities," *Quarterly Journal of Economics*, Vol. L (May, 1936), No. 3, pp. 456-475.

[35] J. M. Clark remarks correctly with respect to the effects of the World War upon the United States (*The Costs of the World War to the American People* [New Haven, 1931], p. 233): "In general the effect of the war upon agriculture was the reverse of its effect on the country as a whole, save that in both cases it meant more hard work during the emergency. For the country as a whole it meant privation during the emergency and probably some partial recompense in the way of heightened prosperity afterward. For agriculture it meant prosperity during the emergency and heightened privation afterward. This difference in order of sequence is not an unimportant one."

V

The disequilibrium of agriculture in relation to other industries in periods of price inflation and deflation is increased through the effect of fixed charges.[36] In contrast to fixed and sunk costs, fixed charges, however, have no influence upon the elasticity of supply except indirectly. They may have an influence upon the elasticity of supply indirectly in so far as the existence of fixed charges affects the marginal utility of money to the entrepreneur, and in so far as increase or decrease in the personal efforts of the entrepreneur, resulting from a change in marginal utility of money, affects supply. Both conditions can be assumed to be fulfilled to a larger degree in agriculture than in other industries. How this may reduce elasticity of supply was mentioned above. It is conceivable, however, that fixed charges have the opposite effect; that is, they increase elasticity of supply. If prices decrease, the existence of fixed charges may force the farmer to reduce cash expenditures for variable factors such as fertilizers, equipment, fuel, feed, and hired labor below the most profitable input level if he has no reserves, no credit, no way to liquidate assets economically, and no opportunity for equally attractive employment elsewhere. If prices increase, the pressure of fixed charges is relieved and the farmer is free to use variable cost factors until marginal costs are equal to marginal revenue. Because of these two opposite effects of fixed charges, their net effect upon the elasticity of supply needs careful study before conclusions can be drawn.

Fixed charges are more important during price inflation and deflation through their direct effects upon income distribution than through their indirect effects upon elasticity of supply. It is here that differences in their effects between agriculture and other industries appear. Fixed charges are generally more prevalent in agriculture than in other industries and influence, therefore, income distribution in favor of agriculture during price inflation and to the detriment of agriculture during price deflation.

There are several reasons for the relatively greater importance of fixed charges in agriculture. First, there are differences between agriculture and other industries in the way in which outside funds are obtained. In agriculture outside money funds are always obtained in exchange for a fixed money claim to principal and interest, whereas industrial enterprises obtain a large proportion of outside funds in exchange for a share of the net income. Second, mortgages with their greater legal obstacles against change play a larger role among fixed money claims in agriculture than in other industries. Third, taxation of agriculture is to a larger extent than taxation of industry based on property taxes which do not vary with changes in prices as do taxes which are more important for industry like income, sales, and similar taxes. During periods of deflation, the basis of income and sales taxes is reduced and public expenditures usually increased through unemployment relief and, after a war, through interest and amortization of public debts. Property taxes cannot be reduced and may even

[36] Fixed charges represent contractual obligations of an economic unit to make current payment regardless of the nature and origin of these payments. Fixed costs, on the other hand, can be attributed to the manner of use of factors of production regardless of property and other rights, and regardless of whether money or other transactions are involved to secure their use.

have to be increased, as in the United States during the acute deflation between 1920 and 1923.[37]

A special feature of fixed charges for the landowning farmer is the fact that interest burden tends to approach economic land rent. Besides the natural and institutional peculiarities of real estate, indebtedness is encouraged by the belief that existing land rent is something permanent or will even increase. Debtors and creditors regard interest burdens as bearable as long as they correspond within a certain margin of safety to current land rent. Often this safety margin is overstepped in anticipation of a rise in rents; so that fixed charges even under stable price conditions absorb total current land rent and often a part of the farmer's current labor income. If inflation sets in, current agricultural land rents rise particularly high because of the peculiarities in agricultural demand and supply discussed in the two previous sections. Debt and interest burden tends to rise correspondingly fast, facilitated by, and in turn facilitating, the rise in land values which accompanies rising land rents. If deflation sets in, agricultural land rents fall particularly low for the reasons previously discussed. It becomes impossible to meet interest charges. Forced sales set in, necessitated by, and in turn accelerating, the decrease in land values which accompanies falling land rents. It is in this downward spiral that the resistance to change of fixed charges leads to a particularly painful redistribution of the national income to the detriment of landowning farmers. Depending on their relative economic importance and political power this has led repeatedly in history to a breakdown of the whole credit and exchange structure of a country, to revolutions, and to civil wars. For the economic position of individual farmers, fixed charges, particularly interest charges, have been more important during periods of inflation and deflation than were location, nationality, farming system, land tenure, and size of farms.

VI

After having discussed the most important inherent peculiarities of agriculture in relation to price inflation and deflation, certain conclusions may now be drawn regarding the more probable influences of the present war upon agriculture, particularly upon the agriculture of the United States.

There is no doubt but that inflationary, and later deflationary, tendencies in aggregate money incomes and prices will emanate from this war as from its predecessors after unemployed factors and abnormal stocks have been utilized. On the other hand, there are many forces less effective before which will exercise a dampening influence regardless of the total amount of economic war effort—as yet small in comparison to the preceding struggle—which will be made. First, in the belligerent and in many neutral countries the state has succeeded right from the beginning in setting up such an elaborate system of direct and indirect controls over private consumption and production, that reductions and shifts of consumption and changes of production can be accomplished with less fiscal credit inflation than before. The same controls tend to minimize the importance of bottlenecks in production. Second, through per-

[37] Cf. Index of farm real estate taxes per acre, published regularly in "The Agricultural Situation," Bureau of Agricultural Economics, U. S. Department of Agriculture.

fected systems of foreign exchange regulations the state is able, in belligerent and neutral countries alike, to bring about desired changes in economic transactions with foreign countries with the least possible effect upon domestic and foreign price levels. But even if changes in domestic price levels occur they do not necessarily have outside influence because the balance of payments positions are now rigidly controlled. Third, since the last World War external price levels have been to a large extent emancipated from the effect of increased international gold flows which will originate from the present war as they did in the past. The gold policy of the United States is the major factor which, as yet, saves gold from formal demonetization. Already, inflation or deflation of prices in terms of gold is economically much less important than before.

Besides the probably smaller extent of price inflation, and, correspondingly, deflation, there are differences between the present and the previous war with respect to the effect of inflation upon agriculture.

The slow and limited adaptation of costs and supply and the slow and painful adjustment of fixed charges appear as the characteristics distinguishing agriculture from other industries during inflation and deflation. It follows that the degree of adaptation and adjustment reached by agriculture in the beginning of an inflation period must be of major importance. At the beginning of the first World War, internationally and in the United States, an approximate equilibrium within agriculture and between agriculture and other industries had been reached. Adjustments in costs, supply, and fixed charges had been completed in the course of the severe agricultural depression during the deflation of the seventies, the eighties, and the first half of the nineties. Purchasing power of agricultural products was rising in terms of the finished goods and services farmers buy; land values were increasing moderately; and indebtedness was rising but interest burdens were not regarded as heavy in view of rising land rents. Under such conditions inflation destroyed an equilibrium. Purchasing power of agricultural products in terms of goods and services farmers buy, land values, and fixed charges rose rapidly. However, this favorable position of agriculture was highly unstable. Subsequent deflation brought about a most severe agricultural depression.

Today the situation is somewhat different. One may safely say that in world agriculture the largest part of necessary adjustments in costs, supply, and fixed charges was completed during the agricultural depression of the twenties and the thirties. But in individual countries some adjustments have still to be made. The latter is true for the United States, where production adjustments within agriculture are still in progress, partly aided and partly impeded by government action; where disparities in the price structure still exist; and where liquidation of fixed charges has not yet come to an end. As examples of the first kind of disequilibria may be mentioned cotton, tobacco, and several tree fruits, for the second kind the price ratios between agricultural raw materials on the one hand and finished industrial products and services on the other; for the third kind the abnormally large holdings of agricultural real estate by banks, insurance companies, and public and semipublic agencies anxious to sell. Under such conditions the initial stages of price inflation may not cause instability as the inflation of the World War did, but may be an aid towards sta-

bility. Thereafter, if inflation continues, the effects of the World War, the Civil War, and the Napoleonic Wars will be repeated.

One further difference between the present situation and that of 1914-18 is the greater knowledge available now of long-term trends in American agriculture and their relation to war economics. The World War only temporarily interrupted the decreasing trend of agricultural exports from the United States which for fundamental domestic and foreign reasons began during the first decade of the present century and was strengthened rather than weakened as the result of the aftereffects of the World War. It is conceivable that the present war will again increase the demand for agricultural exports. This, however, is by no means certain since the effective demands of the belligerents will probably be largely directed towards finished industrial goods. Furthermore, every one of the three or four major possibilities of change in the political pattern of American agricultural export markets resulting from this war will accentuate the decreasing trend of agricultural exports in the postwar period. In view of the slow and painful adjustment in agriculture discussed in the preceding pages, a great expansion of agricultural production to satisfy a temporary increase in export demands may eventually cost the farmer and the country more than the net value increased war exports. This is likely even if payment actually is made through transfer of foreign funds, and if such transfer is made in a form not harmful to the American economy as a whole. A merely temporary expansion of agricultural production for export would impede seriously agricultural and industrial reorganization of the cotton belt, urgent changes of farming systems in the semi-arid portions of the wheat belt, conservation of tobacco lands in the Atlantic states, and safeguarding the productivity of western ranges through appropriate stocking and grazing methods. One may say, therefore, that the present cautious policy of the United States Department of Agriculture which discourages abrupt production increases is justified not only for the present moment of uncertainty for which it is mainly conceived, but also for a longer period with a view to the international economic situation which will arise when this struggle is ended.

ROUND TABLE ON POPULATION PROBLEMS

ALVIN H. HANSEN, *Chairman*

Papers were read at this round table by Joseph J. Spengler, on "Population Movements and Economic Equilibrium," by Otto Nathan, on "Population Movements and Cyclical Movements," and by O. E. Baker, on "Present-Day Population Trends and American Agriculture," and Morris A. Copeland, James G. Evans, and Alan R. Sweezy participated in the discussion. Abstracts of both papers and remarks were submitted by those taking part.

JOSEPH J. SPENGLER: This paper[1] is concerned principally with the effects of the various population movements now in process in the United States upon the level of employment. Many writers who have discussed the economic and other implications of population movements in recent years have tended to emphasize too much and in an unduly alarmistic fashion the economic effects of demographic trends underway; they have emphasized some trends at the expense of others that call for more attention, and have tended to explain in demographic terms economic conditions which are attributable predominantly if not wholly to non-demographic factors.

Population movements now in process probably exercise a greater influence today than formerly upon the amount of absolute and disguised unemployment in the American economy because of the greater specificity of factors of production today as compared with formerly.

In the absence of counterbalancing non-demographic conditions prevailing demographic trends will conduce to economic disequilibrium, i.e., to disguised or complete unemployment, if: (1) different segments of the population grow at different rates; or (2) changes in the rate of growth of the total population accelerate too markedly the rates at which the demands for given categories of labor shift in a negative direction.

Intersegment differences in growth rates assume four principal forms in the United States today: (a) variations by occupational or social class; (b) variations by race; (c) variations by geographical region; (d) variations by age group. Of these categories *a* and *c* appear to be most important at present. Categories *a-c* of growth differentials contribute, individually and collectively, to structural as distinguished from cyclical disequilibrium; for, in consequence of these differentials, the relatively less productive (in per capita terms) portions of the occupational pyramid are being recruited relatively rapidly, and the populations residing in the lower-per-capita income sections of the United States are being swelled more rapidly by natural increase than those living in the higher-per-capita income sections. A better national inter-occupational and interregional balance will develop in proportion as present differentials are reduced or reversed, education and training programs are adjusted to the counterbalancing of natural increase differentials, and new mobile nonhuman economic resources are distributed geographically in different proportions than in the recent past.

The thesis of Carter Goodrich and his co-workers relative to migratory

[1] To be published in full in the *Journal of Political Economy.*

movements and the distribution of economic opportunity appears to be based in part upon historical fatalism and requires to be re-examined critically by competent economists and geographers.

Intersegment difference *d*—variations by age group—is a temporary phenomenon in so far as it may be a contributing source of unemployment. Even at present, in view of the fact that a given occupational group will diminish in the absence of recruits at a rate in excess of 2 per cent per year, difference *d* is a source of unemployment only because of the inadequate organization of the various institutions whose function it is to distribute among employments the new annual increments of as yet unspecialized workers.

Turning to "2" we find the argument that a decline in the rate of population growth (or the introduction of a zero or sub-zero rate of population growth) tends to augment the relative amount of unemployment to be founded upon the following suppositions: (a) a decline in population will reduce the rate of investment and worsen entrepreneurial expectations; (b) as a result of the decline in the rate of investment unemployment develops in the durable goods industries and spreads to the non-durable goods industries. This general line of argument is partly valid only under certain circumstances; it does not appear to be completely valid under any circumstances, given such factual information as we possess. This line of argument is more or less important and significant in proportion as the American economy is less or more flexible.

As matters stand at present the problems issuing out of the differences described under "1" appear to be of greater national import than those issuing out of the situation described under "2."

OTTO NATHAN: The relationship between population movements and the economic development has been given a great deal of attention in the last few years. The question has been raised whether the failure of the American economy to enjoy full recovery since 1929 is not, at least partly, a result of the decline in the rate of population growth. It has been felt that the decline in the birth rate and the decline in immigration are to a certain degree responsible for the large-scale unemployment that has characterized the economic development in this country in the last ten years. It has been felt that the declining rate of population growth has adversely affected the demand for new capital. It is believed that the American economy might face, in the years to come, difficulties similar to those in the recent past if the rate of savings and the rate of voluntary investments do not change fundamentally.

In analyzing the relationship between population movements and the economic development a distinction should be made between the secular trend and the business cycle proper. One of the factors constituting the secular or long-term development is the population movement itself. The factors other than the population movement affect changes in population as changes in population affect the other factors. The secular trend will, therefore, be entirely different under a declining population from what it would be under a stationary or an increasing population. However, a change in the secular trend because of a declining population does not necessarily mean a change in the rate of growth per capita or even a contraction in the economy. The rate of growth can continue to increase if it has increased before when the factors responsible

for that increase continue to operate; in other words, when new investments in productive capacity exceeding the obsolescence therein will not cease. It is obvious, however, that a sharp decline in population growth such as has occurred in the last decade will necessarily curtail the size of new investments. Hence it will lead to painful adjustments. In the end, changes in the structure of the economy will result from a drastic decline in the rate of population growth or from a decline of the population. The demand for certain consumers' commodities and indirectly for capital goods will be reduced, a contraction within certain industries will follow—with many complicated consequences upon the propensity to consume, the marginal productivity of capital, the demand schedule for certain commodities, the mobility of labor, the banking system, etc. The difficulties resulting from those disturbances will be enhanced by the inevitable change in the age distribution of the population that occurs simultaneously.

In order to gauge the significance of population movements for the business cycle itself, it is necessary to raise the question whether the increasing population during the nineteenth century was one of the prime causes of the increase in national income or whether the increase in national income, the result of expansionist investments, made the large increase in population possible. In other words: whether the exploitation of new inventions and of technological developments and the opening up of new territories are to a higher degree initiating factors in the development of the secular trend than the population movement proper. The statistical material available, particularly the work of Professor Harry Jerome, indicates that during the nineteenth century the large waves of immigration followed, and not preceded, upward waves in business. There was, according to Professor Jerome, a "pronounced tendency for cyclical fluctuations in immigration to, and in emigration from, the United States to be determined primarily by cyclical fluctuations in industrial activity in this country."

This statistical evidence is supported by theoretical analysis. More people certainly constitute potential additional demand, but also additional man power that seeks employment. The new demand will not become effective unless the national income has risen before. Its rise depends to a very great extent on an increase in new investments. An increase in population does not necessarily mean an increase in national income as, on the other hand, a decline in population does not mean a decline in national income. It does not seem that the mere existence of more people would stimulate new investments in additional apartment houses and additional productive capacity for consumers' commodities to any considerable extent. And only if the number of unemployed absorbed by these new investments would be larger than the number of people added to the population, would unemployment be reduced.

The pressure upon wages, because of the larger supply of labor does not, under a system of imperfect competition, increase the rate of profits to such an extent that entrepreneurial initiative for new investments of any significance would be forthcoming. And only if the increase in purchasing power because of these investments is larger than the decline in purchasing because of the decline in wages, would unemployment be reduced.

Moreover, the bidding up of rents and prices which would increase the mar-

ginal productivity of capital, and which, therefore, would facilitate new investments, will not occur until the additional people spend new income which is not merely a result of redistribution of previous national income but which is the outcome of an increase in total national income. The increase in national income must be so great that the national income per head of the larger population will not decline. It is true that such an increase in national income can also take place because of an increase in the productions of consumers goods and services. It is, however, very doubtful that an increase in the production of consumers goods and services on a proportionate level will have much significance as an initiating cause. There remains the possibility that increases in population affect entrepreneurial initiative because of their psychological influence upon the entrepreneur. In other words, that entrepreneurs decide to make new investments for housing or for the increase of productive capacity in consumers goods industries long before the national income has actually risen merely because of the expectation of an increase in consumers' purchasing power. I do not believe that such a psychological influence is very powerful. If a recovery or a boom movement is progressing anyhow, psychological influences might accentuate the development. They may originate from a whole host of causes of which changes in population constitute only one.

It would appear from this analysis that the decline in population growth in the United States during the last decade was to a large extent the result of a decline in expansion but that the decline in expansion was not the outcome of the decline in population. The decline in our population growth resulted chiefly from changes in our immigration policy which we would not have initiated had the large demand for labor, the result of expansion which has characterized our development for a century, continued to exist. The painful readjustments in the structure of the economy because of a decline in population growth will doubtless have an effect on the business cycle, for the secular trend and the business cycle are not two independent variables. But there is no reason to assume that once these structural adjustments have been completed, the business cycle, under a stationary population, would not present the same aspects that have characterized it before. If the forces of expansion, either of a deepening or of a widening character, will become powerful again, with or without purposeful stimulation, the booms can be as large as they have been before and the depressions do not need to be any more protracted than they have been in the past.

O E. BAKER: The developments of the past decade indicate to me the need to reconsider some of the assumptions underlying the economic ideas prevalent during the past century and a half. It has been assumed: (1) that the cities would continue to grow and work would be available for rural youth not needed in agricultural production on the farm; (2) that migration of rural youth to the cities resulted not only in improving their material well-being but also contributed to the national welfare, because of the increased production of goods and services; and (3) that the farm family should concentrate its efforts on agricultural production, selling most of the farm products and buying with the proceeds the various goods and services the family needed. It has been assumed, furthermore, that this division or specialization of labor resulted in a larger

national production and, therefore, a higher level of living for a large majority of the people.

Each of these assumptions were generally valid, in my opinion, until about 1930; but they are now only partially valid, it seems to me; and if present trends continue, they appear likely to become less and less valid with the passage of time.

Let us consider these three assumptions in turn, in the light of present conditions:

1. *Decline in Urban Growth and in Opportunity for Rural Youth.* Relative to the growth of the cities and urban opportunity for farm youth: The birth rate has declined so rapidly in the cities that 10 adults in the large cities (those over 100,000 population) are now raising only about 7 children and in the smaller cities, 8 or 9 children, varying generally with the size of the city. Should the birth rate fall no farther in the large cities, the 7 children, when they grow up, would in turn have only 5 children, the 5 only 3½. In a century births would fall to about one third their present number, and a few decades later population would decline in similar degree, unless there were accessions from outside. In several of the large cities deaths now exceed births, and the number of such cities will doubtless increase. These cities are now dependent upon migration from the farms and villages, or from other cities, for the maintenance of their population. For the nation as a whole, the 1940 Census will reveal probably about the same rate of population growth since 1930 in the cities as in the villages or on the farms—about 7 per cent. This may be compared with 27 per cent increase in the urban population from 1920 to 1930.

Nor is aggregate per capita consumption, at least of foodstuffs, increasing. The per capita consumption of cereals has declined, apparently, more than 100 pounds, or fully one third, since the beginning of the century, doubtless owing in large part to an increasing proportion of the population in sedentary occupations, to the automobile, to styles among women, and to other factors. Per capita consumption of sugar has increased perhaps 40 pounds, of milk materially, and of green vegetables notably; but per capita consumption of meat has declined. Totaling all foods on the basis of either farm or retail prices, or of calories, there has been a significant decline. Although a third of the people of the nation are "ill-fed, ill-clothed, and ill-housed," the decline in per capita consumption of foodstuffs, even prior to the economic depression, suggests that we cannot look forward to an increase with any confidence.

Nor can we look forward with confidence to resumption in any great magnitude of migration to our cities from foreign countries.

We should also note the greatly reduced migration from farms. The economic depression and retarded urban growth, with extensive unemployment, has greatly reduced the migration from farms. As compared with a migration from farms exceeding 2,000,000 each year from 1922 to 1929 inclusive, with a return movement to farms averaging about 1,300,000 a year, it appears that in 1931, the first year of the economic depression, the movement from and to farms almost balanced, and that in 1932 there was a net migration to farms of 260,000. Since 1932, the yearly net migration from farms has been about half that in the predepression decade; and youth, both boys and girls, unable

to obtain employment in the cities, have been backing up on farms at a rate of about 400,000 a year. The Census of 1935 reported more than 4,000,000 unpaid family workers on farms, while in 1930 only 1,660,000 were reported. Owing to changes in date of enumeration and in form of question, the comparison cannot be precise, but the magnitude of the increase is significant.

The number of farms increased about 500,000 between 1930 and 1935, reversing the trend of the previous decade, but the number of people living on farms in 1935 who had not been living on farms in 1930 was about 2,000,000. Many, perhaps most, of these new farms were established by these "back-to-the-landers," and were the result, in large part, of the dividing up of farms in areas where the farms were already very small, notably in the Southern Appalachian region, the Ozark-Ouachita area, southern New England, and the upper Great Lakes cutover lands. The increase was slight in the Corn Belt and the Great Plains where the farms are much larger, more mechanized, more commercial, more costly, and in general more productive. It appears wholly possible, if not probable, that a declining national population may be associated with heavy population pressure on the land in regions of high birth rates, which are generally regions of poor soils.

In the farm population of the nation at the present time, 10 adults are raising not 7 children, as in the cities, but 14 children. Should this reproduction rate continue, the farm population would increase 2½-fold in a century, provided there was no migration from the farms. Of course, the reproduction rate undoubtedly will decline, but if the decline is as rapid as from 1920 to 1930, it will be a third of a century before it reaches unity, and another third before it results in a declining population.

If there should be in the future half as great net migration from farms in each five-year age group as during the predepression decade, 1920-29—and half is considerably above the rate during the last decade, 1930-39—assuming also certain further declines in the reproduction rate, the farm population would increase about 2,400,000 between 1940 and 1950 and by about 2,200,000 more between 1950 and 1960. (*See* Table I.) Nearly all this increase would be people of productive ages, 20 to 65. In other words, the increase in farm people in the productive age groups, and, presumably, in number of farms, would be almost as great in the next ten years as in the last ten years, and almost as great again between 1950 and 1960. The increase in farm population of productive ages would be 23 per cent between 1940 and 1960. Most of this increase would occur in the South.

The number of farm youth who are now obtaining farms probably varies in different states from one fourth to three fourths of all farm youth, the smaller percentage being in parts of the South. The other farm youth are facing the alternatives of becoming farm laborers, often on the home farm without cash payments, and, occasionally, tenants, or of seeking a more or less precarious livelihood in the cities. A large proportion of these farm youth are not trained for any skilled city occupation and must seek employment as unskilled or semiskilled laborers. Since machine power is replacing human muscle, and since most cities are growing only slowly now and some are declining in population, the need for unskilled or semiskilled labor is not as great as it was.

The street railroads have been built, the telephone systems and other public services installed, while the number of people employed in manufacture of automobiles has increased very little for a decade and is unlikely to increase greatly in the future. It seems likely that in most cities the number of new skyscrapers and factories to be erected will be fewer after the war demand ceases. The principal urban occupational increases in the future probably will

TABLE I

RURAL-FARM POPULATION BY FIVE-YEAR AGE GROUPS, UNITED STATES, 1920, 1930, AND ESTIMATES FOR 1940, 1950, AND 1960, AND PERCENTAGE EACH IS OF 1930

Age Group	1920*		1930*		Estimates,† assuming ½ net migration like 1920–30					
					1940		1950		1960	
	Number	Per cent of 1930	Number	Per cent of 1930	Number	Per cent of 1930	Number	Per cent of 1930	Number	Per cent of 1930
	1,000		1,000		1,000		1,000		1,000	
Under 4 years	4,143	119.2	3,476	100	3,451	99.3	3,505	100.8	3,252	93.6
5– 9 "	4,113	108.7	3,783	100	3,112	82.3	3,422	90.5	3,255	86.0
10–14 "	3,979	106.3	3,744	100	3,248	86.8	3,245	86.7	3,346	89.4
15–19 "	3,267	95.5	3,422	100	3,589	104.9	2,953	86.3	3,304	96.6
20–24 "	2,487	102.2	2,434	100	3,346	137.5	2,916	119.8	3,017	124.0
25–29 "	2,131	117.2	1,819	100	2,889	158.8	3,122	171.6	2,646	145.5
30–34 "	1,882	112.6	1,671	100	2,031	121.5	2,965	177.4	2,654	158.8
35–39 "	1,906	106.6	1,788	100	1,600	89.5	2,659	148.7	2,939	164.4
40–44 "	1,601	97.4	1,644	100	1,534	93.3	1,902	115.7	2,835	172.4
45–49 "	1,538	98.5	1,561	100	1,634	104.7	1,476	94.6	2,520	161.4
50–54 "	1,266	90.6	1,398	100	1,479	105.8	1,393	99.6	1,760	125.9
55–59 "	975	87.8	1,110	100	1,351	121.7	1,434	129.2	1,314	118.4
60–64 "	845	95.2	888	100	1,128	127.0	1,219	137.3	1,170	131.8
65–69 "	599	92.4	648	100	838	129.3	1,041	160.6	1,126	173.8
70–74 "	386	84.3	458	100	586	127.9	762	166.4	842	183.8
75–79 "	228	88.0	259	100	342	132.0	458	176.8	587	226.6
80 years and over	172	91.5	188	100	261	138.8	352	187.2	479	254.8
Total	31,518	104.1	30,291	100	32,419	107.0	34,824	115.0	37,046	122.3

* Census. Includes allowance of 4 per cent for under enumeration by the census of children under 5 years of age.

† Based on estimates of Warren S. Thompson and P. K. Whelpton, Scripps Foundation for Research in Population Problems, Miami University, Oxford, Ohio.

occur in the services—professional, personal, clerical, etc., particularly those connected with the government. And if employment in the government increases, taxes will tend to increase and real estate values to decrease.

Only about 110,000 farmers are dying each year, releasing a similar number of farms, and possibly as many more are retiring or leaving for other occupations, whereas nearly 400,000 farm youth are reaching maturity each year. The number of youth in the nation is at the crest of the wave—youth born in the peak years 1921 and 1924, whereas employment is just passing out of the

trough of economic depression. Remunerative work, the economic foundation of a family and of a feeling of self-respect, for the 200,000 frustrated farm boys not needed in farming constitutes, in my opinion, the most urgent agricultural problem, if not national problem, of today.

That wonderful era of rapid increase of population, of the flowering of the spirit of freedom and individual initiative, of agricultural expansion, of exploitation of the virgin soils and rich mineral resources of a continent, with the speculation inevitably associated with such exploitation, of unprecedented industrial and commercial development, of growth of cities, concentration of wealth, and rise of urban culture, is drawing to a close. The new era we are entering, judging from present trends, will be characterized by a search for economic security and stability, and by a drift from emphasis on freedom and individual initiative, associated with dependence on the family and occasionally on the church or lodge, to extensive dependence upon the state. No other agency, seemingly, has the power to cope with the conditions that are developing.

2. *Migration Promotes Individual and National Well-Being.* Let us now turn to the assumption that migration of youth to the cities improves their material well-being. Prior to the depression, this was in general true, I believe. But the frequency of unemployment and the inadequate food consumption of the low income groups in the cities indicates to me that many, if not most, of the farm youth are now better off on the land. Dr. Stiebeling, of the Bureau of Home Economics, estimates on the basis of the recent Consumers' Purchase Survey that at least one third of the people in the cities do not have enough good food to eat to maintain a high level of health.[2] Among the village people the proportion is even larger. The best food supply is found among the farming people. This is true in the South as well as the North, the East as well as the West.

We are becoming accustomed to measure level of living in terms of what the census calls facilities—radio, telephone, automobile, electric light, water piped into house—in large part, perhaps, because the census supplies the data. These are important, but more important are food and shelter; perhaps also those things without price, such as pure air and sunshine. Measured by these criteria, so essential to health and to durable satisfactions, the farming people have the highest level of living of any large group of people in the United States, except in parts of the South.

I believe, therefore, that it is now open to question whether most farm youth moving to the cities, even if they find employment, improve their material well-being. It is probably safe to say that half the people in the large cities today have little wealth left other than a secondhand automobile, some old furniture, and the clothes they wear. The youth who obtains employment in the cities will receive, in general, a higher monetary income than he would in farming, but will also face correspondingly higher expenses of living; and if we had statistics, I surmise these would show that, in general, the brother who goes to the city accumulates less wealth than the boy who remains on the farm. But in view of the approaching stationary national population, farming alone

[2] *U. S. Department of Agriculture Year Book,* 1939, p. 34 and pp. 303-308.

cannot support a 7 per cent increase per decade in number of farm families, without a decreasing production per worker in all likelihood, and a declining level of living. We come, therefore, to the third point, which I shall call the diversification, as contrasted with the division of labor.

3. *Diversification Versus Division of Labor.* I am of the opinion that the increasing proportion of the gainfully employed engaged in distribution of commodities has become so large, and the process of distribution so expensive, that farm families would receive a larger real income if they produced rather than purchased some of the fabricated products they need. Of the consumer's dollar paid for food, the proportion received by the farmer has declined from 58 cents twenty years ago to 40 cents in 1938.[3] It appears that as the proportion of the gainfully employed engaged in agriculture and in manufacturing has declined the proportion engaged in distribution and the services has increased; and the income of these classes has increased more or less correspondingly.

Several years ago I spoke at the Agricultural College of Minnesota, and as I entered the hall I noticed a table on which the Department of Home Economics had on exhibit twenty or more kinds of breakfast food. Cream of Wheat was labeled 27 cents a pound, as I recall, Pillsbury's Best (or whatever it was called) was marked 25 cents a pound, and nearly all other brands ranged from 20 to 30 cents a pound. Beside these was a package of homemade breakfast food, ground in a $10 hand mill, or in a feed mill, which many farmers possess, and labeled 2 cents a pound. This home-ground food contained the germ of the wheat and was high, therefore, in Vitamin B1, which is removed with the germ in commercial wheat flour. This is the vitamin which, perhaps more than any other, is likely to be deficient in modern urban diets.

Turning to the textiles, the advantages of home production are less marked. At Berea College, Kentucky, I found that the wage paid the students who were working their way through college by weaving woolen cloth varied from 15 to 20 cents an hour. Around Boros, in Sweden, where I visited, a few of the 10,000 farm women who have been supplied with hand-operated knitting machines for home use, the average pay per day, piecework, was 75 cents to $1.00. This seems small, but it meant apparently the difference between poverty and comfort. These families lived in better houses than most families in the Corn Belt, and practically all had electric light and running water in the house and the other facilities of modern life.

In Oslo, Norway, we visited the Norske Husflidsforening, an organization established by a professor in the University in 1897 to promote the development of home industry. It now occupies a building five or six stories high that covers a large portion of a city block. In this building I saw a staff of about a dozen designers at work and learned that several hundred thousand designs of rugs, curtains, linen cloths, furniture, pottery, and glassware had been provided the members of the society scattered in the fishing villages as well as the farming areas of Norway. We visited the dye room where wool and vegetable dyes had been gathered from all over the world. In the showrooms were excellent furniture, rugs, tapestries, glassware, pottery, and table linen. This

[3] R. O. Been, *Agricultural Situation,* Bureau of Agricultural Economics, February, 1939, p. 11; October, 1939, p. 9.

organization has recently introduced into farm homes the most modern machinery for the making of woodenware.

This educational and sales agency is, in my opinion, the kind of an organization for the promotion of home industry that we need in the United States. For, apparently, the most difficult problem in the development of home industry having products for sale is not production but distribution.

In conclusion, may I note that if migration of rural youth to the cities should be resumed in predepression magnitude, it would increase the proportion of the nation's population having a low birth rate and decrease that having a high birth rate. Thus it would tend to hasten the decline in the nation's population, thereby promoting a decline in the demand for farm products. It might temporarily relieve, but would by no means solve, the problem of agricultural prices.

One less child per farm family and one more child per city family, if maintained, would hold national population stationary, which is probably the most desirable condition, for one reason because it would result in the largest proportion of the population being in the productive-age groups. But in view of the conditions of living and philosophy of life in the cities, the one more child appears extremely unlikely. Instead, a further decline appears probable. At the same time, progress in agricultural technique will almost certainly continue. Farms in areas of level surface and fertile soils seem likely to become larger and farm population sparser, while in areas of hilly surface and poor soils, farms may become smaller and farm population denser. The need for income supplemental to that from agriculture in these less productive regions is becoming acute.

I place my hope that modern occidental civilization can avoid the decline which has characterized all civilizations in the past in the development of an intermingled rural and urban culture. In this "rurban" civilization the rural family, which is not only an institution for the reproduction of the race but also for the education of the child and the transmission of wealth and culture from generation to generation, will be retained; likewise the old virtues of hard work, thrift, and honesty. For the institution of the family and these virtues that have developed out of the experience of centuries are essential to the survival of a people.

The spread in prices between producer and consumer will be narrowed, and a larger proportion of the population engaged in basic production. The villages will become more important and the cities less important than at present. There will be much home industry associated with agriculture, but with the electric motor generally providing the power. It will be a simpler civilization in all likelihood, and some of the things now considered necessities, automobiles for example, may become luxuries. But there will be more interest and better taste in art and architecture and, I hope, more time for communion with nature, more concern with the things of the spirit. For unless people have something to live for, they perish.

Some may say, history does not repeat itself, there is never a return to the "old times." Yet this is occurring at present in agriculture, as it has time and again in the past—not exactly, of course, but in substance. Millions of people

are returning, of necessity, to a more or less self-sufficing system of farming. The great increase in farms during the past decade has been in "self-sufficing" regions, and the evidence indicates to me that this is not a transitory condition.[4] Social scientists need, as I see it, to help salvage the good out of modern urban culture and unite it with the good in rural culture, in order that the immense material gains of modern civilization may not be largely lost.

In the development of this new "rurban" civilization, the people of the United States are exceptionally fortunate relative to natural resources. In our nation there are about 2½ acres of arable land per person, as compared with 1½ acres in Russia, 1 acre in Germany, about ½ acre in China, and ¼ acre in Japan.

Even in the Southern Appalachians, the area of outstanding population pressure, this ratio of land to people is much higher than in many parts of the world. The total area of the Southern Appalachians (south of Mason and Dixon's line) is about the same as that of Japan, excluding Hokkaido, the area of arable land is nearly the same (15,000,000 acres), the water power is doubtless greater in the Southern Appalachians, and the coal and iron resources vastly superior. Yet the Southern Appalachians support only 6,000,000 people, while Japan supports 60,000,000. This is a difference greatly exceeding the difference in standard of living.

But Japan has a rice culture, with terraces built during centuries, while the Southern Appalachians has a corn culture. Rice culture conserves, whereas corn culture facilitates erosion of hilly lands. Morover, in most farmers' gardens in Japan, I am told, there is a shrine to the ancestors. The land is a holy heritage from the past to be handed down to the next generation undiminished in fertility and, if possible, with the fertility increased. And, aided by science, crop yields have increased greatly in Japan; whereas in the United States, despite scientific and technical progress, the governmental machinery for the promotion of agriculture, and the powerful influence of the agricultural press, the trend has been slowly downward for a quarter century. We need something in our nation corresponding to those ancestral shrines in the gardens of Japan.

MORRIS A. COPELAND: As I understand it, both Professor Spengler and Professor Nathan regard secular changes in birth and death rates for the total population as having less significance for general business conditions than the secular stagnation hypothesis would indicate. They question the tendency to

[4] "The decade of depression, 1929 to 1939, closes with production at a new all time peak; but there are still more than 9,000,000 unemployed. Estimated production in December is at index 128, compared to the previous all time peak of 125 in 1929, and production in the last quarter has equalled the highest quarter in 1929. Nevertheless recovery of production has not been enough to put the unemployed to work. . . .

"In October, 1929, the Federal Reserve Board adjusted index of industrial production stood at 118, and there were 47,000,000 persons at work in the United States, with only 1,000,000 unemployed; ten years later, in October, 1939, the production index stood at 120, and there were 44,000,000 at work and 9,000,000 unemployed. In these ten years, machinery and laborsaving devices had replaced 3,000,000 workers. While these 3,000,000 jobs were eliminated, 5,000,000 new workers were added to our working population, making a total 8,000,000 for whom jobs are needed. These 8,000,000 new job seekers, added to the 1,000,000 unemployed in October, 1929, make up our present army of 9,000,000 unemployed."—*Monthly Survey of Business* of the American Federation of Labor, November-December, 1939, p. 1.

secular stagnation and emphasize the importance for business trends of non-demographic factors such as technological change, the opening up of new territories, and improvements in the standard of living. It appears to be implied in both of their papers that it is not unlikely that business will be substantially better in the decade of the forties than it was in the decade of the thirties. So much for crude birth and death rates for the total population. The situation with respect to rate differentials stands in contrast. Dr. Baker calls attention to the fact that the relatively high birth rate in rural areas tends to aggravate the oversupply of farmers. And Professor Spengler, in urging that differentials in birth rates are more important than secular changes in the total birth rate, finds in this rural-urban differential the chief illustration of his thesis.

While I agree with the conclusion reached by Professors Spengler and Nathan respecting the relation of population to general business conditions, I question the process by which they have reached this conclusion. To me they seem to have accepted too many of the Keynesian premises. It would not be possible here to consider in detail the intricate theoretical issue which this disagreement involves. Instead, I wish to suggest the need for empirical tests of the various hypotheses regarding population and general business conditions. There is need to compare (a) the business situation in the 1930's with that in preceding decades and (b) the concomitant and antecedent circumstances for the various decades in respect to technological change, in respect to the opening up of new areas, and in respect to improvements in the standard of living, as well as in respect to the secular trends of birth and death rates.

With respect to the opening up of new areas during the nineteenth century and the passing of the frontier toward its close, it may be unnecessary to expect further empirical citation. Attention is called, however, to the fact that the frontier passed too long ago for this fact alone to account for a prolonged depression after 1929. Incidentally, I should like to suggest that the different position which this country occupies in the world economy is an important one to take into account in explaining secular trends in the characteristics of the business cycle which make depression a more difficult social problem. It is no longer possible to obey the injunction, "Go West, young man"—to meet a depression situation by withdrawing from the price economy. On the contrary, the opening of new areas and previously unworked resources in other parts of the world tends to aggravate our business troubles.

Professors Nathan and Spendler have also suggested as factors affecting the secular trend of characteristics of the business cycle both technological changes and improvements in the standard of living. I do not recall that either has introduced evidence to show that, during and immediately preceding the thirties technological change was less encouraging to business prosperity than it had been in the case of previous decades. Neither do I recall that either of them has introduced evidence to show that improvement in the standard of living was less encouraging to business prosperity in the thirties.

One further comment on the empirical aspect of the argument seems called for—one having to do with the business situation itself. While I do not wish to question the length and severity of depression during the thirties, I do suggest that this is not the first time long and severe depressions have given rise

to a hypothesis of secular stagnation. Thus, Veblen in his *The Theory of Business Enterprise*, written just after the turn of the century, regarded "chronic depression" as the normal condition of business "under the fully developed regime of the machine industry."[5]

In considering the theory of secular stagnation, one need not question the basic Keynesian hypothesis to raise a very crucial question regarding the declining rate of population growth as a factor making for business depression. After the manner of the familiar distinction between desire and effective demand, we may distinguish between total population and effective population. If we have ten million unemployed, these ten million and their potential dependents are not part of the effective population. Hence, the possible growth of our effective population is substantially greater than is the possible growth of total population. So far as business conditions are concerned, we may appropriately ask, "Why cannot the economy grow by absorbing the unemployed as well as by absorbing the new born or those newly arrived from abroad?" If we are to avoid confusion and error, the secular stagnation theory should be stated in terms of the declining rate of growth of the effective population.

If the outlook for the 1940's may be correctly inferred from the papers by Professor Spengler and Professor Nathan, we should, I believe, take note that this inference has an important bearing on the problem which Dr. Baker has so graphically portrayed. If the inference is well founded, the acute problem of urban placement of an excess rural population takes on a short-run rather than a long-run character.

JAMES G. EVANS: I shall confine my remarks to an examination of some of the broad implications for social policy that seem to be inherent in the papers presented by Professor Spengler and Dr. Baker. Professor Spengler's paper presents a remarkably thorough analysis of population movements as both conditioning and dynamic elements in the contemporary economy. Most outstanding is his use of the concept of economic equilibrium to picture the ideal situation with respect to the economic use of human and other resources, and the development of what may be called a concept of social equilibrium to show the nature of the economic problems that arise out of demographic conditions and demographic change. These concepts are largely independent of the institutional framework and therefore provide criteria for judging the effectiveness of its operation with respect to demographic factors and also the criteria which serve as a basis for social policy.

Variation in the rates at which different segments of the population grow as well as changes in the rate of total population growth are considered possible sources of disequilibrium. Serious problems in education and in population distribution arise when low income groups or regions of low productivity furnish a disproportionate or even a proportionate share of population replacement and growth. Such demographic conditions influence the division of income and the social background of the young; they invariably necessitate readjustment of the institutional framework, if disequilibrium is to be avoided. Of course it is impossible to diagnose these problems and prescribe a solution for

[5] Thorstein Veblen, *The Theory of Business Enterprise* (New York, 1904), pp. 184, 212-234, 251-253, 264.

them without an understanding of the kind of civilization we are trying to build in the United States. Although the details are lacking, both Professor Spengler's paper and that of Dr. Baker infer the existence of unattained social objectives as the stimulus to social readjustment.

The problems created by the relatively rapid growth of rural population, especially in the Southeast, accompanied by a failure to expand economic opportunity in urban industries, are effectively presented by Dr. Baker. Pending a more effective social control over the national economy, a greater self-sufficiency of farm families and of farm communities is by all means desirable as long as there is unused labor, merely as a means of minimizing poverty. The extent to which the use of electric motors will make small-scale production relatively efficient in many processes is not yet known, but it is doubtful whether such small-scale autarchy will provide family incomes comparable with those obtained through participation in larger-scale production processes.

Both Professor Spengler and Dr. Baker exhibit a lack of faith in the operation of automatic forces to remedy the disequilibrium which already exists or to prevent further disequilibrium as a consequence of demographic change. Professor Spengler takes the position that trends in population movement, such as urban or regional concentration, cannot be extrapolated to provide a basis for future economic and social policies. He is to be commended for his doubts regarding the conclusions of those studies which have largely ignored the imperfection of our arrangements for attaining an economic location of various industries. It is surely an established historical fact the geographic and free market factors have been neither the only, nor in many instances the most important, determining elements in the location and growth of our urban communities. We must conclude that the disequilibrium which Dr. Baker describes is also a consequence of our failure to satisfactorily adjust the institutional framework to demographic and other conditions.

It is of course quite justifiable to assume a particular institutional setup, such as the present one, and speculate upon the consequences of variation in the rate of growth of different segments of the population or of the population as a whole. But it is very difficult to be realistic in such an analysis because the exact degree in which the economy is self-adjusting cannot be readily discovered. Furthermore, the degree of self-adjustment varies with time and place and thus accurate generalizations have but a temporary applicability. Since the institutional structure has changed considerably in recent decades, it is doubtful whether historical data can throw much light upon present capacity for self-adjustment. Whatever conclusions are reached relative to the automatic impact of population movements are in any case predestined by the degree of competitive enterprise and resource mobility that is assumed to exist.

Actually the rules and procedures provided by the state to govern the performance of economic functions will determine the influence of the growth or lack of growth of the population as a whole upon the production and consumption of goods, upon the accumulation of capital, and upon the occupational structure. As Professor Spengler points out, a stationary or even a declining population need not result in unemployment either secular or cyclical. Indeed a greater accumulation of capital, more efficient workers, and scientific advance

enable an increasing output per capita as population ceases to grow. When capital formation occurs at a more rapid rate than population growth, there will be, according to fundamental economic theory, a decline in the marginal productivity of capital and an increase in the marginal productivity of labor, if equilibrium with a full use of resources is attained. Professor Spengler recognizes this inherent necessity. It seems to me, therefore, that the really pertinent problem arising from a declining rate of population growth and further capital accumulation is concerned with the nature of the institutional adjustments that are necessary to achieve and retain social equilibrium. How can the economy be made to function satisfactorily while the rate of return on capital is declining and income is being distributed in such a manner as will permit the mass consumption that must accompany mass production?

ALAN R. SWEEZY: Laymen in particular have difficulty in accepting the proposition that the decline in the rate of population growth is closing an important outlet for investment funds and hence contributing to the relative economic stagnation of the present time. They want to know how this proposition can be reconciled with the existence of unemployment. If more people will provide an investment outlet why won't unemployed people do the same?

In spite of this apparent paradox I think the population investment argument, carefully interpreted, is valid. Three different ways in which population growth might affect investment must be distinguished:

1. Through its effect on the community's division of its income between savings and consumption. As Professor Spengler has pointed out, additional dependents reduce the margin available to a family for saving. The practical importance of this factor is diminished, however, by the concentration of savings in the relatively few higher income families.
2. Through its effect on the direction of consumer expenditure. Both Professor Hansen and Mr. Keynes have stressed the fact that population growth is one of the main determinants of the demand for agricultural products and for housing accommodation and that these are two of "the most highly capitalized services" in the economy. In the case of housing particularly it is not a matter of absolute need but rather of the intensity of demand necessary to make the field a profitable one for private investment.
3. Through its effect on the supply of labor. Dr. Nathan is quite right in pointing out that this is more a limiting than an initiating factor. The only way increasing labor supply could by itself initiate an increase in investment would be through its effect in depressing wages. Under certain circumstances, e.g., 1920 in this country, wage reduction may be favorable to investment. In a situation where investment demand is generally weak, however, its effect is at best doubtful.

Once an investment boom in underway, increase in the labor supply does have an important influence on investment. Wages rise more slowly than they would with a constant labor supply and numerous investment opportunities consequently can be exploited which would otherwise be unprofitable. The boom once started may be expected to last longer if the labor supply is increasing.

Over the past century and a half technological change and territorial expansion have generally been the initiating factors but population growth through its effect on the labor supply has pushed back what would otherwise have been relatively narrow limits to the field of profitable investment opportunity.

Here, as so often, the economist's attempt to study one factor in strict isolation runs into insuperable difficulties. The foregoing remarks assume implicitly that population growth can be separated from technological change and territorial expansion. To a large extent such separation is impossible. Territorial expansion, for instance, is, as Professor Hansen has pointed out, inseparable from population growth. And without territorial expansion and population growth some of the most important technological developments of the last century, the railroad for instance, would have been of relatively minor importance as investment outlets.

ROUND TABLE ON RECENT BOOKS ON CONSUMPTION

THEODORE N. BECKMAN, *Chairman*

Until recently the field of consumption constituted a dark area in our economic thinking and writing. To be sure, much is to be found on the subject in Adam Smith's *Wealth of Nations,* but no special treatises have been written about the subject until the present century.

During the 1920's much interest was exhibited in consumption and a full fledged consumer movement blossomed forth during the present decade. Such awakening of interest has resulted in the publication of a number of books dealing specifically with this subject. Most of these writings were published during the present decade; in fact, since 1935.

Books in this field have come off the press so fast and points of view and methods of approach have varied so much that it was deemed proper to schedule a session of this type. For purposes of this session, six of the most recent books were chosen for review. They were treated in three groups.

In the first group were included *Consumption in Our Society,* by Elizabeth Hoyt, and *The Consumer and the Economic Order,* by Warren C. Waite and Ralph Cassady, Jr. These two books were reviewed by Dr. Hazel Kyrk. Immediately after this paper was read, Professor Cassady made his reply.

In the second group were included *The Consumer-Buyer and the Market,* by Jessie V. Coles, and *Consumers and the Market,* by Margaret G. Reid. These two books were reviewed by Professor Homer W. Widener. Following his presentation, the paper prepared by Professor Coles was read, in her absence, by Dr. Elinor Pancoast and Professor Margaret G. Reid also replied to Professor Widener.

In the third group were included *Economics for Consumers,* by Leland J. Gordon, and *Income and Consumption,* by Roland S. Vaile and Helen G. Canoyer. These two books were reviewed by Professor Willard E. Atkins. Replies to the reviewers were made by Professor Gordon and Professor Vaile, respectively.

Inasmuch as the six books under consideration differ in a number of ways, it was to be expected that there would be some disagreement and criticism from the reviewers, but all expectations were exceeded by the extent of the criticism and the sharpness of the differences in point of view. However, the authors were, in some cases, no less vehement in their replies. All of this made the session a lively one and it is believed that a reading of the specific criticisms of ideas, points of view, assumptions, and conclusions should prove exceedingly valuable in appraising some of the most important recent literature on the subject of consumption. The complete papers presented by both reviewers and authors of the books reviewed will be published in a supplement to the *Journal of Marketing.*

ROUND TABLE ON COST FUNCTIONS AND THEIR RELATION TO IMPERFECT COMPETITION

THEODORE O. YNTEMA, *Chairman*

At this round table papers were presented by J. M. Clark,[1] on "Some Speculations as to the Requirements of Workable as Distinct from Ideal Competition," by Joel Dean, on "Statistical Cost Curves in Various Industries," and by Roswell H. Whitman,[2] on "Cost Functions in the Department Store." The discussion was led by George J. Stigler. The following abstracts were prepared by the several speakers.

J. M. CLARK: Where one of the conditions of perfect competition is absent (as is always the case) the presence of others may lead to greater rather than less imperfection. Potential competition remains an important factor. So far as imperfect competition is governed by long-run curves of individual demand and cost, these are flatter than commonly represented and the imperfection of competition correspondingly less. As to short-run problems, industry with fluctuating demand requires prices in excess of short-run marginal cost, though still limited by competition. Favorable conditions appear to include a sloping individual-demand curve and some uncertainty whether a reduction of price will be quickly met.

With standardized products, a chaotic market tends toward cutthroat competition. Oligopoly with a standard product is limited by its one-way action, by the chance to gain good will or large orders through initiating a price reduction, by the personal equations of producers, and by some intermittent "chiseling." A special case, not wholly impossible, is that of a standard product, sloping individual-demand curve, and some uncertainty as to the meeting of price reductions. While extreme cases of quality differentials approach monopoly, more moderate cases afford the conditions of fairly healthy and workable imperfect competition. This class of cases may be increased in the future by the further development of closer substitutes for existing products, together with better knowledge of qualities and specifications on the part of buyers.

JOEL DEAN: This paper presented provisional findings of an investigation designed to determine empirically the patterns of short-run and long-run cost behavior of individual enterprises in a variety of industries. Six case studies of short-run cost were summarized.

To observe the effects upon cost of variation in rate of plant utilization, firms and observation periods were selected that displayed great variability of output while eliminating or minimizing changes in scale, technology, proportion and quality of products, and price-motivated input substitution. When necessary, an index of output was constructed. Heterogeneous products were combined by weighting each according to its deflated standard cost.

Recorded components of combined cost were individually rectified for changes in prices of materials and services, for errors in accounting allocation,

[1] To be published in full in the June issue of the *American Economic Review.*
[2] To be published in *Econometrica.*

and for discrepancies between the time of recording output and the costs that contributed to it.

Multiple correlation analysis was used to determine the relationship between these corrected cost elements (individually and in combination) and output, while holding constant at their means other significant cost influences peculiar to each enterprise. The character of the resulting cost functions was validated by critical ratio tests, by variance analysis, and by independent analysis of cost and output first differences.

Typical multiple correlation results for a leather belt shop, three department-store departments, a hosiery mill, and a furniture factory were shown by a series of slides. Partial regressions of cost on output and on other operating factors were displayed, together with total, average, and marginal statistical cost curves for combined cost and its components.

Theoretical analysis usually posits rising marginal cost over the relevant output range, yet no instance of rising marginal cost within the range of actual operation was found. It appears likely, however, that marginal cost will rise beyond this observed range as the limit of physical capacity is reached.

Possible explanations are multiple battery plants, plants designed for minimum cost near physical capacity, and technological, conventional, or market restraints on cost "forcing" of output.

ROSWELL H. WHITMAN: Cost behavior for department stores is complex. Its study is hampered by problems of determining a measure of output. The data used for the present paper were weekly costs and output. Output was corrected for nonhomogeneity both by a multiple regression equation and by creating an index with average cost weights.

The cost functions presented included:

1. The relation of delivery mileage cost to packages delivered. The marginal cost is a decreasing function of output.

2. The relation of salesclerk costs to the number of transactions. This may be a decreasing, constant, or increasing function of output, depending on the organization of the selling department, the character of its peak business, and so forth.

3. The total store variable cost function. This function has constant marginal costs within the normal range of output, but high marginal costs at the peak. This cost behavior is due to a relatively low efficiency as near capacity output is approached.

While marginal costs are an increasing function of output, because of the seasonal fluctuation of business and the relatively small seasonal fluctuation in price, price is above marginal costs for most of the year.

Though this indicates imperfect competition, it is not necessarily socially undesirable to have eleven month idle capacity to serve the public during the Christmas shopping season.

GEORGE J. STIGLER: The statistical cost curves presented by Dean and Whitman seem somewhat in conflict with our expectations, based as they are in large part on the classic law of diminishing returns. In the cases of constant short-run marginal costs, undoubtedly the existence of a divisible plant (many similar machines, for instance) is an important explanation, as Dean suggests.

In addition, there are probably two biases in the statistical procedure which lead to the same result in the cases here presented: First, plants which had experienced very wide fluctuations of output were selected, and these are precisely the plants which would be built with a maximum of flexibility (so that the marginal cost curve would be relatively flat). Second, short-run alterations of plant, which usually cannot be eliminated on the basis of accounting records, lead to a speciously flat marginal cost curve. The falling marginal cost curves are even more suspect; they seem to be due to variations of product quality and to misallocation of costs as between fixed and variable.

An alternative method of deriving costs curves deserves serious consideration: the construction of the production function. This method has its defects, not the least of which is that the economist must become a technician. But there are important advantages to this alternative; we are released from dependence on accounting records, which are frequently unavailable and even more often unusable; and the statistical problems involved in time series are largely avoided.

I wish to raise only two questions with respect to Clark's very stimulating paper. First, I question the general importance of potential competition as a limitation on monopoly prices. I would argue that (1) low prices per se will not discourage potential rivals, who may expect a quota, and (2) if such a quota is refused, and the existing firms will not tolerate new rivals, there are cheaper methods of communicating this intention to potential rivals than by setting low prices. Second, I do not see why flat marginal cost curves (well below average costs throughout a considerable range of outputs) make pricing according to the competitive norm—marginal cost equals price—impossible. For there is demonstrably always such an amount of investment in an industry that, given the fluctuations in demand, the losses and profits will cancel over time. Of course investment is frequently such as to make losses exceed profits if a competitive pricing policy is followed, but I would argue that this is due to price agreements, and that one cannot justify such agreements on grounds of their necessity to prevent losses because this is circular reasoning.

There ensued an active general discussion in which the speakers and many others among those present participated.

MINUTES OF THE BUSINESS MEETINGS OF THE AMERICAN ECONOMIC ASSOCIATION HELD IN PHILADELPHIA, PENNSYLVANIA, DECEMBER 28 AND 29, 1939

The first business meeting of the American Economic Association was held at 9:00 A.M., December 28, 1939, in the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, President Viner presiding.

The minutes of the meeting of December 30, 1938, were approved as printed in the *Proceedings of the Fifty-first Annual Meeting,* pages 250-251.

The following reports were read and approved:

1. The Secretary. (See page 405)
2. The Managing Editor. (See page 410)
3. The Treasurer. (See page 412)

The President appointed Eliot Jones, of Stanford University, James E. Moffat, of Indiana University, and Calvin B. Hoover, of Duke University, as a Committee on Resolutions.

Adjourned.

The second business meeting of the American Economic Association was held at 9:00 A.M., December 29, 1939, in the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, President Viner presiding.

The minutes of the December 28, 1939, meeting were read and approved.

The following reports were read and approved:

1. The Finance Committee. (See page 414)
2. The Auditor. (See page 417)

There was no report from the Joint Committee on Income Tax Statistics.

J. M. Clark submitted a report summarizing the principal activities of the American Council of Learned Societies for the year 1939. Copies of this report were distributed to those interested and one is kept on file in our records.

In submitting a summary of the annual report of the Social Science Research Council (see page 423), E. G. Nourse called attention to the desirability of more intimate knowledge on the part of our membership concerning the activities of the S.S.R.C.

The following report of the Committee on Resolutions was read and approved:

WHEREAS, The members of the American Economic Association, meeting in its fifty-second annual session, December 27-29, 1939, at Philadelphia, Pennsylvania, desire to express their appreciation to those who have contributed to the success of the conference, therefore be it

Resolved, That the Secretary be instructed to convey the thanks of the Association to Professors C. A. Kulp and W. N. Loucks and associates of the Committee on Local Arrangements for the excellent preparations made for the meeting and for the effective handling of the details; and be it further

Resolved, That we extend to the officers and Executive Committee of the Association, to those assisting President Viner in the preparation of the program, and to participants in the program our appreciation of their valuable services; and be it finally

Resolved, That we extend to the management of the Bellevue-Stratford Hotel and of co-operating hotels our thanks for the facilities supplied and for their contribution to the success of the conference.

ELIOT JONES, *Chairman*
CALVIN B. HOOVER
J. E. MOFFAT

The Secretary presented the certification of election:

In accordance with the by-laws on election procedure, I hereby certify the results of the recent balloting, and present the reports of the Nominating Committee and the Committee on Elections.

The Nominating Committee, consisting of Alvin H. Hansen, Harvard University, chairman, Arthur R. Burns, Columbia University, Frederick S. Deibler, Northwestern University, Robert D. Calkins, University of California, Charles O. Hardy, Brookings Institution, and Tipton R. Snavely, University of Virginia, presented to the Secretary the following list of nominees for the respective offices:

For President
Frederick C. Mills
John H. Williams

For Vice-Presidents
James W. Angell
Morris A. Copeland
Calvin B. Hoover
Holbrook Working

For Executive Committee
J. Douglas Brown
Howard S. Ellis
Edward S. Mason
George W. Stocking

Representative to Social Science Research Council
Herbert Feis
Edwin G. Nourse

The Committee on Elections prepared biographical sketches of the various candidates and ballots were distributed early in October. The canvass of the ballots was made on November 11, 1939, and the results were filed with the Secretary.

From the report of the Committee on Elections I have the following information:

Numbers of envelopes without names for identification	18
Number received too late to count	39
Number of defective ballots	1
Number of legal ballots	1,277
Number of returns from the mail ballot	1,335

On the basis of the canvass of the votes cast, I certify that the following persons have been duly elected to the respective offices:

President (for term of one year)
Frederick C. Mills

Vice-Presidents (for term of one year)
James W. Angell
Calvin B. Hoover

Members of the Executive Committee (for term of three years)
J. Douglas Brown
George W. Stocking

Representative to the Social Science Research Council (for term of three years)
Edwin G. Nourse

James Washington Bell, *Secretary*

Adjourned.

REPORT OF THE SECRETARY OF THE ASSOCIATION FOR THE YEAR ENDING DECEMBER 13, 1939

The following report includes the minutes of the meetings of the Executive Committee held during the year.

1. Minutes of the second meeting of the 1939 Executive Committee:

The second meeting of the 1939 Executive Committee was held at the Shelton Hotel, New York City, March 24 and 25, 1939. There were present: President Viner, presiding, Miss Newcomer, and Messrs. Anderson, Bell, Dewey, Graham, Homan, Sprague, Westerfield, and Williams.

The minutes of December 30, 1938, published in the March, 1939, supplement of the *American Economic Review*, were read and approved as printed.

Communications concerning the meeting of the Institut International des Sciences Economiques were read and discussed. No action was called for.

The relationship of the Association with regional groups was again discussed. The Secretary was instructed to report the results of the special ballot inserted in the March, 1939, number of the *American Economic Review;* and to consider Chicago as a favorable alternate meeting place in case New Orleans is not selected for 1940.

An invitation from President W. C. Mitchell for the Association to change its status from that of "associated" to that of "affiliated" society of the American Association for the Advancement of Science was submitted and discussed. The Secretary was instructed to investigate the advantages and disadvantages involved in such an arrangement with the A.A.A.S. and, jointly with the President, to submit a report at the December meeting.

Voted: That each member of the Executive Committee submit to the Secretary names of nominees for honorary membership in the Association—names and biographies to be collated and distributed for consideration at the December meeting.

The question of family memberships was again raised and discussed but no action was taken.

Styles and samples of engraved membership certificates were submitted by the Secretary for inspection.

The Secretary was instructed to carry on with the classification of membership, to have new information cards printed, so as to keep up to date the information contained in the "who's who" handbook for new members coming in, and to plan for a revision along the present lines for 1940.

The inauguration of placement information service was discussed and it was voted to announce in the *American Economic Review* that applications for teaching positions and descriptions of teaching vacancies would be solicited and published in the notes or a section devoted to the purpose in the *Review.*

The question of permanent secretariat was reviewed but no further action was taken. President Viner reported that he would appoint the committee provided for in the minutes of December 30, 1938, and present a plan at the December meeting.

The Treasurer reported briefly upon the Association's finances.

Voted: To authorize the expenses of the members of the Nominating Committee meeting in New York, March 25, 1939.

Voted: To select December 27, 28, and 29 as the dates for the 1939 annual meeting.

Voted: To authorize the expenditure of $200 for publicity of the annual meeting.

The rest of the meeting was devoted to the discussion of the program.

Adjourned.

2. Minutes of the third meeting of the 1939 Executive Committee:

The third meeting of the 1939 Executive Committee was held at the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, at 5:00 P.M., December 28, 1939. There were present: President Viner, presiding, and Messrs. Anderson, Bell, Dewey, Graham, Homan, Westerfield, and, by invitation, President-elect Mills.

Voted: To approve the minutes of the March 24 and 25, 1939, meeting as read.

The meeting of the Institut International des Sciences Economiques in Brussels, July 17 to 19, was reported by the Secretary. The invitation from the Institut to participate in its activities was laid on the table until such time after the war as might prompt a reconsideration of this matter.

Voted: To lay on the table the question of changing our present status from that of "associated" to that of "affiliated" society of the American Association for the Advancement of Science.

Voted: To authorize the President and the Secretary to draft a telegram conveying the greetings of the Executive Committee, on behalf of the members of the Association, to F. W. Taussig on the occasion of his eightieth birthday.

Voted: To approve the Managing Editor's recommendation of the following appointments to the Editorial Board, for a term of three years: E. A. Kincaid and H. M. Groves.

Adjourned.

3. Minutes of the first meeting of the 1940 Executive Committee:

The first meeting of the 1940 Executive Committee was held at the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, at 12:00 M., December 29, 1939. There were present: President Mills, presiding, Miss Newcomer, and Messrs. Anderson, Angell, Bell, Dewey, Goodrich, Graham, Hansen, Homan, Hoover, Viner, and Westerfield.

Voted: To approve the minutes of the December 29, 1939, meeting as read.

The Secretary reported that copies of the surplus inventory of the Associations' publications at the present time being disposed of were distributed abroad and that three free subscriptions were granted for 1939 and 1940 to Chinese libraries in need.

Exchange advertisements with the *Southern Economic Journal* and the *Journal of Farm Economics* were added to the list.

The proposal to hold type for leading articles in the *American Economic Review* so as to permit members to order reprints was found to involve the expense of storing, packing, and tying up type metal—more than the costs of reproducing by modern and improved means.

Voted: To authorize the publication of the handbook for 1940 in the form of a simple directory, together with an appendix showing the geographical distribution of our membership. The publication of a revision of the *Who's Who in the American Economic Association* is to be postponed until a later date, when it is hoped that a reclassification of the fields of economics will be available for use. The Editor's and Secretary's offices were instructed to make preliminary drafts of a reclassification of fields (used in the *Review* for classifying book reviews, abstracts of articles, and Ph.D. dissertation lists) and report at the March meeting of the Executive Committee.

Voted: To reappoint the present incumbents of the Finance Committee—Roy C. Osgood, Charles C. Wells, and James Washington Bell.

Voted: To authorize the appointment of the Madison-Crawford National Bank of Chicago as a depository for the Association's funds.

Voted: To continue the present organization of the Secretary's office and to increase the salary of the Secretary-Treasurer to $1,500, beginning January 1, 1940.

Voted: To appropriate the sum of $200 for publicity purposes for the 1940 annual meeting.

Voted: To authorize traveling expenses for the members of the nominating committee up to the amount of $350, the allocation to be made at the discretion of the President.

It was suggested that the Secretary publish in the *Proceedings* the main papers, the abstracts of round table sessions, and, upon recommendation of the round table chairman and at his own discretion, a selection of round table papers within the limits of a reasonable size of the volume. Papers not accepted for the *Proceedings* are to be routed to the Editor of the *American Econmic Review* and, if not accepted, to be released for publication elsewhere.

Voted: To reappoint Davis R. Dewey as Editor of the *American Economic Review* for the year 1940.

Voted: To instruct the Secretary (a) to schedule the balloting for the election of officers two months (November 1) instead of three before the end of the calendar year; (b) to notify all candidates of the results of the count when made (following December 1); and (c) announce the list of successful candidates at the annual business meeting.

Voted: To reconsider our whole election procedure at the next meeting of the Executive Committee.

The Secretary reported the results of the ballot inserted in the March number of the *Review* regarding the selection of meeting place for the annual sessions of the Association.

Voted: To hold the 1940 meeting at New Orleans, Louisiana, December 27 to 30.

Adjourned.

The secretary wishes to comment briefly on three matters of business affecting the general membership of the Association.

First, in the March number of the *Review,* a mail ballot was inserted, calling for an expression of opinion concerning the desirability of holding the annual meeting of the Association at stated intervals in the South and West and for a specific vote on the choice of New Orleans for 1940 and San Francisco for either 1944 or 1946.

The results of the ballot were by no means conclusive, but they did reflect an interest, especially on the part of our members residing in the South and West, in holding our meetings elsewhere than in the East and North Central areas. In view of the national character of the Association, it was felt that we should recognize this demand or in some way co-ordinate the activities of regional economic associations with those of the national group.

Second, in the September issue of the *Review,* an announcement was made in the section on "Notes" (page 663) of the initiation of a new service to our members. The service is to consist of a clearing of information, which should appeal to those who wish to make known their availability for teaching or other professional positions in the field of economics, and to administrative officials and others who are seeking to fill vacancies in this field.

In the December number (following page 932), twenty-four announcements were published of applicants for teaching positions. No vacancies were reported.

It is hoped that members and others will avail themselves of this information and take full advantage of the privilege of clearing inquiries afforded through this medium.

Third, the biennial handbook of the Association, published in 1938, was changed in character from a simple directory to a descriptive *Who's Who in the American Economic Association.* The information added in the enlargement included: affiliation and rank or position of the members, academic degrees, title of doctoral dissertation (with the data of publication), fields of specialization, research projects under way, and a sample of representative publications. It was pointed out at the time that the volume was experimental and that its continuation in this form would depend upon is usefulness and acceptability to our membership. To the offices of the Secretary and the Editor, the volume has proved invaluable, and we plan to continue the collection of the specialized data referred to above for our files. However, the additional expense and effort involved in publishing a revised edition of the "who's who" cannot be justified on such narrow grounds. Unless this office feels some pressure from others, a simple directory of the conventional form will be issued in 1940.

The Secretary's office edited the *Proceedings of the Fifty-first Annual Meeting* and carried on the regular business of the Association.

The following appointments were made by the President:

Nominating Committee
Alvin H. Hansen, Chairman
Arthur R. Burns
Frederick S. Deibler
Robert D. Calkins

Charles O. Hardy
Tipton R. Snavely
Committee on Elections
Reuben Cahn, Chairman
Frederick W. Mueller, Jr.
James Washington Bell
Auditor
Arthur Andersen and Company
Representative on Committee on Local Arrangements
William N. Loucks
Representative at the Inauguration of the President of the University of Texas
George W. Stocking
Representative at the Centenary of Duke University
Dudley De Witt Carroll
Representative at the Sesquicentennial Celebration of Georgetown University
David A. McCabe
Representative at the Meeting of the American Academy of Political and Social Sciences
Frank W. Fetter
Representatives at the Centenary Celebration of the American Statistical Association
Davis R. Dewey
Emanuel A. Goldenweiser

Permission for the use of the mailing list was granted by the President and the Secretary to:

General Motors Corporation
Public Affairs Committee
United States Department of Labor
Princeton University Press

The changes in the membership list that have taken place during the year ending December 13, 1939, are as follows:

Total members and subscribers in December, 1938			4094
Annual members in December, 1938		2764	
Members removed in 1939:			
Resigned	40		
Lack of address	10		
Nonpayment of dues	81		
Died	15	146	
		2618	
Members added in 1939		288	
Total annual members in December, 1939		2906	
Life members in December, 1938	41		
Removed in 1939	1		
Total life members in December, 1939		40	

Honorary members in December, 1938	19		
Added in 1939	1		
Total honorary members in December, 1939		20	
Total members in December, 1939		2966	
Subscribers in December, 1938	1270		
Removed in 1939	182		
	1088		
Added in 1939	204		
Total subscribers in December, 1939		1292	
Total members and subscribers in December, 1939			4258
Net gain			164

The above increase in membership is due largely to the co-operation of members who have sent in nominations. I wish to thank those members and hope that this co-operation on the part of the membership will continue.

It it with regret that the names of the following persons have been removed from our active membership list, notice of their death having been received during the year:

Frederick L. Allen
John A. Campbell
William Coan
Joseph C. France
Henry B. Gardner
Max S. Handman
James Hillhouse
Clarence L. Holmes
Harold N. Lawrie
Emil Lederer
James A. McLaughlin
Saul N. Minkoff
Frank O'Hara
James H. Rogers
Edwin R. A. Seligman (Life Member)
Victor E. Vraz
A. Leo Weil
Caroline Whitney

Respectfully submitted,
JAMES WASHINGTON BELL, *Secretary*

REPORT OF THE MANAGING EDITOR OF THE AMERICAN ECONOMIC REVIEW FOR THE YEAR ENDING DECEMBER, 1939

The expenses during 1939 by principal items were as follows:

Printing (paper, reprints, postage, etc.)	$ 6,471.45
Editorial	2,500.00
Clerical	3,032.10
Supplies	389.63
Contributors	1,453.50
	$13,846.68

This is slightly in excess of the budget appropriation submitted a year ago; namely, $13,800.00. It will be noted, however, that the average number of copies printed this year was 4,625, as compared with 4,500 in the previous year; and the number of pages for the entire volume was 932, an increase of 55 pages over the preceding volume.

On the basis of printing 4,700 copies per issue in 1940, the following budget is submitted:

Printing (paper, reprints, postage, etc.)	$ 6,500.00
Editorial	2,500.00
Clerical	3,200.00
Supplies	400.00
Contributors	1,600.00
	$14,200.00

During the year 1939, 993 new books were received, as compared with 942 in 1938. During the year 249 persons have co-operated in writing leading articles, communications, and reviews. The number of leading articles published is 34.

The following persons have served as editors during the past year: Professors Alzada Comstock and Leonard L. Watkins, whose terms expire this year; Professors Arthur R. Burns and B. F. Haley, whose terms expire in 1940; Professors Fritz Machlup and Royal E. Montgomery, whose terms expire in 1941.

Under the supervision of the secretary-treasurer, Professor Bell, the advertising material is increasing, as will be seen by the treasurer's report.

Beginning with the December issue of this year, the *Review* has added a new department of "Academic Vacancies and Applications." This work is carried on through the secretary's office. It is to be noted that the officers of the Association take no responsibility for making a selection among the applicants or following up the results.

It is also to be noted that the department of public documents has been omitted during the past year. The titles of the principal documents previously listed in this department have been included in the lists of new books.

The usual tables are appended.

Respectfully submitted,

DAVIS R. DEWEY, *Managing Editor*

TABLE I—PAGES GIVEN TO EACH SECTION*

Year	Leading articles	Reviews	New books listed	Documents, reports, etc.	Periodical abstracts	Notes	Theses	Totals
1920	395	109	155	98	122	42	15	936
1921	331	103	133	39	117	38	11	772
1922	293	91	158	35	124	37	13	752
1923	298	122	184	26	113	43	14	800
1924	339	110	191	23	113	42	18	836
1925	325	131	178	27	110	38	23	832
1926	270	137	184	15	108	43	27	784
1927	262	120	195	32	114	42	27	792
1928	335	111	176	12	121	45	28	828
1929	315	181	173	18	1	52	28	768
1930	348	154	210	12	0	58	29	811
1931	369	170	197	13	0	40	25	814
1932	351	175	203	12	0	27	24	792
1933	360	178	179	6	34	28	24	809
1934	376	120	188	7	48	44	22	805
1935	341	198	183	7	46	37	21	833
1936	384	161	185	5	39	31	20	838
1937	386	194	202	4	35	41	20	882
1938	379	179	208	5	44	41	22	878
1939	445	180	188	0	51	46	22	932

* Figures for 1911–19 may be found in the report for 1930, published in the *Supplement*, March, 1931, p. 284.

TABLE II—EXPENDITURES

Year	Printing	Salary of editor	Payments to contributors	Clerical	Supplies	Totals
1920	$6,656.31	$1,500.00	$1,122.75	$1,595.64	$307.20	$11,181.90
1921	5,646.97	1,500.00	64.50	1,472.50	319.97	9,003.94
1922	4,795.28	1,500.00	—	1,370.00	314.77	7,980.05
1923	5,032.59	1,500.00	—	1,650.09	437.86	8,620.54
1924	5,423.28	1,500.00	1,110.25	1,464.01	305.32	9,802.86
1925	5,713.01	1,500.00	1,133.50	1,757.32	406.36	10,510.19
1926	5,332.24	1,500.00	1,128.00	1,589.86	323.43	9,873.53
1927	5,619.20	1,500.00	1,013.75	1,806.50	297.25	10,236.70
1928	5,321.95	1,500.00	1,190.50	1,956.50	375.37	10,344.32
1929	4,927.62	1,500.00	1,328.75	2,004.50	261.72	10,022.59
1930	5,386.67	2,500.00	1,447.75	2,253.00	347.80	11,935.22
1931	5,399.94	2,500.00	1,454.75	2,300.00	327.60	11,982.29
1932	5,143.23	2,500.00	1,451.00	2,300.00	386.13	11,780.36
1933	4,606.07	2,500.00	1,408.25	2,436.00	380.75	11,331.07
1934	4,670.43	2,500.00	1,384.75	2,420.00	326.12	11,301.30
1935	5,109.53	2,500.00	1,357.50	2,540.00	445.08	11,952.11
1936	5,316.56	2,500.00	1,450.00	2,540.00	345.12	12,151.68
1937	5,908.40	2,500.00	1,541.75	2,751.00	364.72	13,065.87
1938	6,078.35	2,500.00	1,438.15	2,990.00	452.96	13,459.46
1939	6,471.45	2,500.00	1,453.50	3,082.10	389.63	13,846.68

REPORT OF THE TREASURER OF THE ASSOCIATION FOR THE YEAR ENDING DECEMBER 13, 1939

The resources of the Association continue to grow. This year we added $4,747.62 to last year's assets, making a total of $67,264.66. The items reflecting in detail the financial condition of the Association and of the changes which have occurred during the past year are shown in the balance sheet exhibit of the auditor's report. The main changes involved in the assets are a stronger cash position and additions to our investment account, together with a small increase in office equipment (including an envelope sealer at $80.00, less trade-in value of old machine and discount of $18.80, and a typewriter at $72.10, less trade-in value and discount of $17.50) and a substantial write-down to net selling price of *Economic Essays.* Accounts payable are relatively large because the printer's bill for the December issue of the *American Economic Review* had not yet been received as the books were closed.

With regard to operating results, total income from all sources remained substantially the same as last year, a small increase from dues being practically offset by decreased dividends and a loss taken on the sale of securities. Administrative expenses were less this year than last, chiefly because no handbook was published in 1939. Increased publication expenses of the *Review* and the *Proceedings* are accounted for by the larger editions and by the greater number of pages published. Increased subscriptions and sales and larger advertising revenue, however, reduced the net publication expense.

In the accompanying tables is presented a statistical summary of our holdings of bonds and stocks from 1925 to date, together with the changes in the cost and market value and the dollar and percentage yield. The latter is computed on the basis of cost. Since 1937, the return from interest and dividends has declined. The rate of return is now roughly 4.5 compared with 5.1 in 1938 and 6.3 per cent in 1937. It has been previously noted that the income of 1937 from this source was exceptional on account of the operation of the undistributed profits tax, and the decline in the past year is not in the least alarming. We should be very gratified with our present rate of return. It has been made possible only because my capable colleagues on the Finance Committee are willing to follow our holdings closely.

Respectfully submitted,

JAMES WASHINGTON BELL, *Treasurer*

INVESTMENT PORTFOLIO

Year	At Par	Cost			Market
	Bonds	Bonds	Stocks	Total	Stocks and Bonds
1925	$25,000	$24,661.75		$24,661.75	
1926	27,000	26,623.25		26,623.25	
1927	29,000	28,688.45		28,688.45	
1928	29,000	28,633.45		28,633.45	
1929	31,000	30,569.48		30,569.48	
1930	31,000	32,439.48		32,439.48	$32,635.40
1931	39,500	39,134.48		39,134.48	32,307.44
1932	40,500	41,134.48		41,134.48	33,239.70
1933	33,500	32,962.48	$ 3,954.23	36,916.71	31,522.50
1934	31,500	30,989.48	3,954.23	34,943.71	34,714.00
1935	16,000	15,280.48	28,114.50	43,394.98	50,338.72
1936	17,000	16,260.13	33,712.57	49,972.70	62,991.00
1937	20,000	19,160.91	37,399.20	56,560.11	52,064.75
1938	22,000	20,180.95	38,302.20	58,483.15	58,598.88
1939	22,000	20,039.57	41,155.95	61,195.52	61,529.38

RETURN ON INVESTMENTS

	Bonds	Stocks	Total	Rate of Return
1925	$1,350.00		$1,350.00*	
1926	1,410.00		1,410.00*	
1927	1,524.70		1,524.70†	
1928	1,642.77		1,642.77†	
1929	1,575.44		1,575.44†	
1930	1,695.21		1,695.21	5.22%
1931	1,886.81		1,886.81	4.82
1932	2,014.36		2,014.36	4.89
1933	1,679.49	$ 108.57	1,789.06	4.84
1934	1,593.13	218.07	1,811.20	5.18
1935	1,022.96	680.70	1,703.66	3.92
1936	801.77	1,597.63	2,399.40	5.00
1937	884.87	2,689.62	3,574.49	6.31
1938	928.04	2,063.02	2,991.06	5.11
1939	978.79	1,781.52	2,760.31	4.51

* Estimated income for year.
† Certificate of deposit interest included.

REPORT OF THE FINANCE COMMITTEE

During the past year, a net amount of $2,712.37 has been invested in securities. The cost of our investment holdings is $61,195.52 in 1939 compared with $58,483.15 in 1938.

The following specific changes have been made:

Sales

	Par Value	*Cost*	*Selling Price*	*Profit*	*Loss*
Southern Pacific Co., 50-year	$1,000.00	$ 927.50	$ 499.32		$428.18
West Texas Utilities Co., 1st Mtg. Series "A"	2,000.00	1,870.40	2,050.00	$179.60	
Procter and Gamble scrip and Commonwealth Edison rights				41.39	

Purchases

	Par Value	*Cost*
Central Illinois Electric and Gas Co., 1st Mtg., 3¾%, due June 1, 1964	$2,000.00	$2,010.00
Florida East Coast Railway Co., 1st Mtg., 4½%, due June 1, 1959	1,000.00	646.52

	Shares	*Cost*
Commonwealth Edison Co., com.	55	$1,525.51
Chesapeake and Ohio Railway Co., 4%, pfd.	15	1,328.24

As of December 2, 1939, our security holdings are listed below, together with cost and market values. The market figures are compared with those of last year.

Stocks

Number and Class of Shares	*Cost*	*Value Market or Last Sale 12/14/38*	*12/2/39*
25 Chesapeake and Ohio Railroad Co., com.	$ 1,309.07	$ 862.50	$ 1,037.50
15 Chesapeake and Ohio Railroad Co., 4% pfd., "A"	1,328.24		1,410.00
55 Commonwealth Edison Co., com.	1,525.51		1,711.88
50 General American Transportation Corp., com.	3,084.30	2,775.00	2,712.50
100 General Electric Co., com.	2,738.19	4,425.00	3,875.00
50 General Motors Corp., com.	2,057.47	2,512.50	2,643.75
58 Glidden Co., com.	1,635.72	1,435.50	1,051.25
14 Glidden Co., convert. pfd.	735.00	644.00	560.00
10 Household Finance Corp., 5% pfd.	903.00	1,030.00	1,040.00
25 International Harvester Co., pfd.	3,686.63	4,050.00	4,100.00
50 Kroger Grocery and Baking Co., com.	1,297.22	1,025.00	1,400.00
25 Liggett and Myers Tobacco Co., com. "B"	2,018.13	2,459.38	2,500.00
50 Link Belt Co., com.	2,524.15	2,337.50	1,825.00
50 Mesta Machine Co., com.	2,007.37	2,000.00	1,668.75
50 J. C. Penney Co., com.	2,878.28	3,825.00	4,668.75
50 Procter and Gamble Co., com.	2,459.72	2,743.75	3,175.00
50 Standard Brands, Inc., com.	888.15	325.00	281.25
50 Standard Oil Co. of California, com.	2,097.27	1,406.25	1,268.75
50 Union Carbide and Carbon Corp., com.	2,867.88	4,475.00	4,375.00
100 Wayne Pump Co., com.	3,114.65	3,100.00	2,300.00
	$41,155.95	$41,431.38	$43,604.38

BONDS

Par Value		Int. Rate	Due	Cost	Value Market or Last Sale 12/14/38	12/2/39
$1,000	Alabama Power Co., 1st Lien and Ref. Mtg.	5%	1956	$ 1,042.50	$ 967.50	$ 1,045.00
2,000	Central Illinois Electric and Gas Co., 1st Mtg.	3¾	1964	2,010.00		1,990.00
3,000	Chicago, Terre Haute and Southeastern Railway Co., 1st and Ref.	5	1960	2,012.12	1,755.00	1,800.00
1,000	Erie Railroad Co., Ref. and Imp. Mtg.	5	1975	932.50	132.50	147.50
1,000	Florida East Coast Railway, 1st	4½	1959	646.52		560.00
2,000	Gary Electric and Gas Co., 1st Lien Col. Series "A"	5	1944	1,920.40	1,910.00	2,000.00
2,000	Grand Trunk Western Railway Co., 1st Mtg. 50-year	4	1950	1,855.45	1,760.00	1,580.00
3,000	Gulf States Steel Co., 1st (closed) Mtg. Sinking Fund	4½	1961	2,900.78	2,835.00	2,902.50
2,000	Nevada-California Electric Corp., 1st Mtg.	5	1956	1,895.40	1,580.00	1,595.00
1,000	Pennsylvania Railroad Co., 40-year Gold Deb.	4½	1970	945.00	830.00	885.00
1,000	Pennsylvania Railroad Co., Gen. Mtg. Series "D"	4¼	1981	986.50	920.00	950.00
1,000	Southern Illinois and Missouri Bridge Co., 1st Mtg. 50-year	4	1951	822.00	650.00	710.00
2,000	Southern Railway Co., 1st Consol. Mtg.	5	1994	2,070.40	1,630.00	1,760.00
				$20,039.57	$14,970.00	$17,925.00

It will be observed from the following summary that this year's results, as well as those of last year, reflect little variation in the market compared to the cost value of our total holdings.

	Cost 1938	Cost 1939	Market Value 1938	Market Value 1939
Bonds	$20,180.95	$20,039.57	$17,465.00	$17,927.00
Stocks	38,302.20	41,155.95	41,431.38	43,604.38
Total	$58,483.15	$61,195.52	$58,896.38	$61,529.38

Since one of the objectives of our policy is relative stability of capital values, we should be satisfied with these results.

The income from our investment holdings for the past year has been as follows:

	Income	Rate of return on cost
Interest on bonds	$ 978.79	4.88%
Dividends from stocks	1,781.52	4.08%
Total	$2,760.31	4.51%

Our income from bonds is slightly higher this year than last and dividends perceptibly lower. Extra dividends have not been so plentiful this year. Though the rate of return is still good (4.51 per cent), it represents a slight decline

from last year. However, a higher income could hardly be expected without jeopardizing the safety of the investment. A summary of the rate of return from our investments from 1925 is given in the Treasurer's report.

We see no reason to change our general investment policy. Under normal circumstances, if we were solely interested in the security of capital we would buy low yield, high-grade bonds. At present prices the only direction of change in their value would seem to be downward, and there is a risk involved in committing funds to fixed income securities. The increase of a fractional per cent in the market rate of interest would mean a very substantial decline in the value of such long-term holdings. If it should prove necessary to sell high-grade bonds before maturity under conditions of rising interest rates, we would have to realize substantial losses, and if not liquidated, our fixed income at present low levels would remain "frozen." The possibilities of inflation make the exclusive holding of high-grade bonds hazardous. We have therefore attempted to adapt ourselves to the exigencies of present-day conditions.

The present distribution of our holdings represents about 40 per cent in bonds and 60 per cent in stocks, 16 per cent of the latter being in preferred shares and a reasonably good diversification of business risks. The purchases made this year involve (1) a shift of two bonds of about equal grade, and (2) the addition of one unit of a sound investment common stock and one of preferred stock. The Erie Railroad bond is still in default, but under present circumstances we do not feel disposed to sell it.

Respectfully submitted,

ROY C. OSGOOD, *Chairman*
CHARLES C. WELLS
JAMES WASHINGTON BELL

REPORT OF THE AUDITOR

December 20, 1939

Executive Committee,
American Economic Association,
Evanston, Illinois.

DEAR SIRS:

We have made an examination of the balance sheet of the American Economic Association as at December 13, 1939, and of the related statement of income and expenses for the period from December 15, 1938, to December 13, 1939. In connection therewith we have examined or tested accounting records of the Association and other supporting evidence and have reviewed the accounting procedures of the Association by methods and to the extent we deemed appropriate, but we did not make a detailed audit of the transactions. A similar examination was made for the period from December 16, 1937, to December 14, 1938. Further comments regarding the scope of our examination are contained in subsequent pages of this report.

The following exhibits are included in this report:

Balance sheet—December 13, 1939	Exhibit 1
Statement of income and expenses for period from December 15, 1938, to December 13, 1939	Exhibit 2

Results of Operations

Net income for the year ended December 13, 1939, was $3,112.92 as compared with $1,220.62 for the preceding period, as shown by the following condensed comparative summary:

Particulars	Year Ended 12/14/38	Year Ended 12/13/39	Increase or *Decrease*
Income from—			
Dues	$13,964.65	$14,500.92	$ 536.27
Interest and dividends on investments	2,912.23	2,665.45	*246.78*
Other sources (net)	33.60	*205.53*	*239.13*
Total income	$16,910.48	$16,960.84	$ 50.36
Expenses—			
Administrative and other operating expenses	$ 6,840.50	$ 6,244.97	*$ 595.53*
Contribution to finance Higgs' economic bibliography	1,333.33		*1,333.33*
Reduction in carrying value of inventory of *Economic Essays*		713.57	713.57
Publication expenses	15,881.71	15,672.96	*208.75*
Publication income	*8,365.68*	*8,783.58*	*417.90*
Total expenses	$15,689.86	$13,847.92	*$1,841.94*
Net income	$ 1,220.62	$ 3,112.92	$1,892.30

The increase in income from dues reflects the increase in the membership

of the Association during the period under review. The membership at the beginning and end of the period as reported by the Secretary was as follows:

Classification	Number of Members 12/14/38	12/13/39
Members—		
Annual	2,764	2,906
Life	41	40
Honorary	19	20
	2,824	2,966

Interest on bonds owned was accounted for and dividends received on stocks were compared with amounts reported in published records of dividend disbursements. Interest coupons from April 1, 1938, through October 1, 1939, on $1,000.00 principal amount of Erie Railroad Company refunding and improvement 5% mortgage bonds of 1975 held by the Association are in default.

A contribution of $1,333.33 was made in the preceding period toward the financing of Higgs' economic bibliography. No similar contribution was made during the current year.

The decrease in administrative and other operating expenses is accounted for principally by a reduction in the clerical help in the office of the Secretary-Treasurer because there was no handbook published during the year 1939.

During the year the remaining copies of *Economic Essays* were offered for sale at $1.00 per copy. The inventory price of the copies on hand was accordingly reduced to $1.00 less an allowance for postage; the aggregate reduction of $713.57 was charged to the current year's income account.

Net publication expense decreased $626.65 as shown by the following summary:

Particulars	Fiscal Year 1938	Fiscal Year 1939	Budgetary Estimates for 1939
Expenses—			
Printing of—			
Review	$ 6,119.21	$ 6,494.67	$ 6,000.00
Proceedings	1,234.10	1,785.91	
Handbook	1,118.84	*	
Editor's honorarium	2,500.00	2,500.00	2,500.00
Payments to contributors	1,435.65	1,453.50	1,600.00
Editorial clerical salaries	2,990.00	3,032.10	3,300.00
Other costs and expenses	483.91	406.78	400.00
Total expenses	$15,881.71	$15,672.96	$13,800.00
Less— Income—			
Subscriptions, other than from members	$ 5,973.74	$ 6,202.32	
Sales of copies	565.23	703.79	
Advertising	1,826.71	1,877.47	
Total income	$ 8,365.68	$ 8,783.58	
Net publication expense	$ 7,516.03	$ 6,889.38	

* None issued in 1939.

Printing expenses for 1938 included a charge of $1,118.84 for publication of a handbook for which no corresponding charge was incurred in 1939. Other

printing costs increased as a result of the increase in the number of copies and pages printed.

The Association issued the following publications during the years 1938 and 1939:

	Quantity Printed		Number of Pages	
	1938	1939	1938	1939
Review	4,500	4,600–4,700	966*	1,024*
Proceedings	4,500	4,600	200	288
Handbook	4,500	–	112	–

* Including 16-page volume index.

Financial Condition

Condensed balance sheets of the Association at December 14, 1938, and December 13, 1939, are set forth in the following comparison:

Assets	12/14/38	12/13/39	Increase or *Decrease*
Cash in bank	$ 1,113.15	$ 4,042.50	$2,929.35
Receivables, net	837.25	801.76	*35.49*
Inventories	1,722.61	876.06	*846.55*
Furniture, fixtures, etc., at cost	1,634.46	1,673.11	38.65
Reserve for depreciation	*1,273.58*	*1,324.29*	*50.71*
Investments, at cost—			
Bonds	20,180.95	20,039.57	*141.38*
Stocks	38,302.20	41,155.95	2,853.75
	$62,517.04	$67,264.66	$4,747.62

Liabilities	12/14/38	12/13/39	Increase or *Decrease*
Accounts payable	$ 75.59	$ 1,796.17	$1,720.58
Unearned income	3,017.35	3,044.78	27.43
Membership extension fund	3,436.17	3,322.86	*113.31*
Fund for proposed permanent secretariat	35.00	35.00	
Life memberships	3,725.00	3,700.00	*25.00*
Surplus—			
Balance at beginning of period	50,632.31	52,227.93	1,595.62
Net income for period	1,220.62	3,112.92	1,892.30
Transfers from life memberships	375.00	25.00	*350.00*
	$62,517.04	$67,264.66	$4,747.62

Cash in bank was reconciled with the balance confirmed direct to us by the depositary.

We did not confirm the receivables of the Association by correspondence with the debtors. The reserve for doubtful accounts appears to be sufficient to cover such losses in collection as could be estimated at the time of our examination.

The inventories of the Association include 497 copies of *Economic Essays*. During the year 2 copies were sold at the advertised price of $1.00 each. As a result of advertising, some copies were sold after December 13, 1939, but the realization of the inventory valuation appears doubtful.

The following securities were purchased and sold in 1939:

	Purchase or Selling Price
Purchased—	
Central Illinois Electric and Gas Company, first mortgage bonds, 3¾%, due June 1, 1964, $2,000 principal amount	$2,010.00
Florida East Coast Railway Company, first mortgage bonds, 4½%, due June 1, 1959, $1,000 principal amount	646.52
Commonwealth Edison Company, common stock, 55 shares	1,525.51
The Chesapeake and Ohio Railway Company, 4%, Series "A" preference stock, 15 shares	1,328.24
	$5,510.27
Sales—	
Southern Pacific Company, 50 year bonds, 4½%, due May 1, 1981, $1,000 principal amount	$ 499.32
West Texas Utilities Company, first mortgage bonds, Series "A" 5%, due October 1, 1957, $2,000 principal amount	2,050.00
The Procter and Gamble Company, scrip (received in 1939)	33.14
Commonwealth Edison Company, rights (received in 1939)	8.25
	$2,590.71

The investments of the Association were confirmed by correspondence with the State Bank and Trust Company of Evanston, Illinois, custodian for the Association.

In so far as we could ascertain from the examination made, all liabilities of the Association at December 13, 1939, are reflected in the accompanying balance sheet and the Secretary-Treasurer has represented that to the best of his knowledge and belief all liabilities were disclosed to us. We did not confirm the liabilities of the Association by correspondence with the creditors.

We wish to express our appreciation of the courtesies and co-operation extended to our representatives during the course of the examination.

Very truly yours,

ARTHUR ANDERSEN AND COMPANY

EXHIBIT 1

AMERICAN ECONOMIC ASSOCIATION

BALANCE SHEET—DECEMBER 13, 1939

Assets

CURRENT ASSETS:			
Cash in State Bank and Trust Company, Evanston, Illinois		$ 4.042.50	
Receivables—			
Interest accrued on bonds	$ 212.34		
Membership dues	191.25		
Review advertising	473.49		
Publication sales	29.59		
Total receivables	$ 906.67		
Less—Reserve for doubtful accounts	104.91	801.76	$ 4,844.26
INVENTORIES:			
Economic Essays, at net selling price		$ 482.09	
Cover stock, at cost		150.97	
Stamped envelopes, at cost		243.00	876.06
INVESTMENTS, AT COST:			
Bonds (quoted price $17,925.00)		$20,039.57	
Stocks (quoted price $43,604.38)		41,155.95	61,195.52
FURNITURE, FIXTURES AND BOUND PERIODICALS, AT COST		$ 1,673.11	
Less—Reserve for depreciation		1,324.29	348.82
			$67,264.66

Liabilities

ACCOUNTS PAYABLE			$ 1,796.17
UNEARNED INCOME:			
Membership dues		$ 587.21	
Subscriptions		2,457.57	3,044.78
MEMBERSHIP EXTENSION FUND			3,322.86
FUND FOR PROPOSED PERMANENT SECRETARIAT			35.00
LIFE MEMBERS AND SURPLUS:			
Life memberships		$ 3,700.00	
Surplus unappropriated—			
Balance, December 14, 1938	$52,227.93		
Net income for the period from December 15, 1938 to December 13, 1939 (Exhibit 2)	3,112.92		
Transfer from life memberships	25.00	55,365.85	59.065.85
			$67,264.66

EXHIBIT 2

American Economic Association

Statement of Income and Expenses

Period from December 15, 1938, to December 13, 1939

Particulars				*Amount*
INCOME FROM:				
Dues—				
Regular members			$14,253.42	
Subscribing and contributing members			247.50	$14,500.92
Other sources—				
Income from investments—				
Interest on bonds		$ 978.79		
Dividends		1,781.52		
Total		$ 2,760.31		
Less—Custodian's fee		94.86	$ 2,665.45	
Deduct—Net loss on sale of bonds, rights, etc.			207.19	
			$ 2,458.26	
Income from sale of *Economic Essays*			1.66	2,459.92
Total income				$16,960.84
EXPENSES:				
Administrative and other operating expenses—				
Secretary's salary		$ 1,000.00		
Office salaries		3,116.00		
Postage		470.87		
Stationery and supplies		283.42		
Telephone and telegraph		61.22		
Insurance		200.00		
Exchange on checks		119.55		
Depreciation		136.71		
Annual meeting		150.61		
Executive committee expenses		242.81		
Other committee expenses		283.83		
American Council of Learned Societies—dues		65.00		
Auditing		50.00		
Miscellaneous		64.95	$ 6,244.97	
Reduction in carrying value of inventory of *Economic Essays*			713.57	
Publication expenses—				
Printing of—				
Review		$ 6,494.67		
Proceedings		1,785.91		
Editor's honorarium		2,500.00		
Payments to contributors		1,453.50		
Editorial clerical salaries		3,032.10		
Editorial supplies and expenses		368.38		
Sundry publication expenses		38.40		
Total publication expenses		$15,672.96		
Less—Publication income—				
Subscriptions, other than from members	$6,202.32			
Sale of copies	703.79			
Advertising	1,877.47	8,783.58	6,889.38	
Total expenses				13,847.92
Net income (Exhibit 1)				$ 3,112.92

REPORT FROM THE SOCIAL SCIENCE RESEARCH COUNCIL

During the preceding year the Council's program in furtherance of research in the social sciences has involved undertakings with respect to research personnel, research organization, research materials, research methods, and the advancement of scientific knowledge.

The work in recruitment and maintenance of research personnel continues to be one of the outstandingly successful phases of the Council's work. During the past year, it resulted in maintaining five predoctoral fellows in the second year of graduate study, sixteen fellows for predoctoral field training, and four postdoctoral research training fellows. It provided forty-one grants-in-aid to assist in the completion of research by mature scholars, and eight grants-in-aid limited to the southern area. These grants amounted to approximately $75,000, and similar aids have been assured through the year 1940-41. In this field, also, the Council has issued a directory of all the fellows who have been appointed by the Council since the beginning of its work and has set up a committee to examine problems of research training.

The Council's work with reference to research materials resulted in stimulating the development and use of methods of reproduction other than print and the study of copyright law in relation to reproduction of materials, including a demonstration of the possibilities of publication on a sliding scale of prices according to the number of advance subscriptions and costs under different print or offset methods. The Committee on Research Materials continued preparation of a manual on the study of economic and social aspects of local history, developed plans and advised on the use of WPA labor in the improvement of materials for research and studied areal problems of union cataloging.

Last year, as in the preceding year, the Council through its Committee on Problems and Policy directed particular study to the problem of the most effective organization of research in the United States and possibilities for helpful consultation between local social science research organizations. It began the exploration of methods and possibilities of various types of conference procedure, such as progressive appraisal and planning conferences of small groups of persons highly qualified on specialized topics and also the somewhat larger standing conferences whose usefulness has been demonstrated by the Price Conference and the Conference on National Income of the National Bureau of Economic Research.

In the field of research methods, the Council has continued the work of the special Committee on Appraisal designed to secure critical analyses of outstanding American studies in the social science field. Six appraisal essays have been prepared, and all-day conferences held on three of these. The documentation and discussion of the first conference was published in August; it covered Thomas and Znaniecki's *The Polish Peasant in Europe and America.* The materials from the conference on F. C. Mills' *Behavior of Prices* are now in process of publication.

The Council now operates less extensively through operative projects than during its early years. Of three project fields in which it still operates one

is public administration; the other two are social security and economic stability. The social security project has produced studies on the co-ordination of the various social insurances in Great Britain and Germany: on problems and procedures of unemployment compensation; on trends, causes, and effects of labor turnover; and on seasonal variations in employment. It has completed for publication a study of old age security abroad and has issued mimeographed suggestions for research on relief, and an outline of policy questions on relief. The project in the field of economic stability has continued support of a series of studies on credit and banking in relation to stability: under the auspices of the National Bureau of Economic Research, work was completed on a handbook of statistical data on urban residential real estate, and two pamphlets on special phases of real estate financing were published by the Bureau.

While the representation from the American Economic Association to the Council has been distinguished and in most cases active, it is by no means clear that the membership of the Association is adequately informed of the work of the Council or that the liaison between the two bodies is as fruitful as it might be. In the annual report of the chairman of the Problems and Policy Committee last September the following comment on this point was included:

> The matter of Council relations to the professional societies in the seven disciplines which we cover was discussed at some length in the June meeting of the Problems and Policy Committee. It was generally agreed that the professional societies as such had little knowledge of and apparently little interest in the work of the Council. The question was raised whether the situation could be remedied by the preparation of notes on current activities of the Council which would be inserted in the various journals or whether some particular means might be found to bring the results of our work before the attention of the societies at their annual meetings, either through special round tables or otherwise. Another possibility that was considered was the inclusion of the senior representative from each society as a member of the Program Committee of that association and/or the inviting of the chairman of the Program Committee to attend the spring Council meeting and dinner.

These are merely tentative suggestions such as emerged in an informal exploratory discussion. The Council would be happy if the American Economic Association through its Executive Committee should feel disposed to give consideration to the work being done by the Council. It would welcome any suggestions which the Association might wish to advance with a view to making Council efforts and expenditures more fruitful and effective.

Respectfully submitted,

EDWIN G. NOURSE

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OF THE

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1940

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The American Economic Association, founded, among other purposes, for "the encouragement of economic research" and "the encouragement of perfect freedom of economic discussion," has over three thousand members, including public and professional men and most of the leading students of political economy in America. Membership dues are five dollars a year. Each member receives all current reports and publications of the Association.

Address all orders for publications, applications for membership, and inquiries to the

SECRETARY OF THE AMERICAN ECONOMIC ASSOCIATION

Northwestern University, Evanston, Illinois

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Handbook
of the
American Economic Association

CONTENTS

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PURPOSE OF THE AMERICAN ECONOMIC ASSOCIATION

The American Economic Association is an organization composed of persons interested in the study of political economy or the economic phases of political and social questions. As may be seen by examining the list of members printed in this supplement, not only are all the universities and the most prominent colleges in the country represented in the Association by their teachers of economics and related subjects, but a large number of members come from among businessmen, journalists, lawyers, men in public life, and others interested in economic principles, or, more often, in their applications to social life. The Association has, besides, a growing representation in foreign countries.

The annual meetings, held during the Christmas holidays, are arranged as forums for the discussion of scientific questions and problems of social and economic policy. They give opportunity for contact and general understanding among teachers, students, and businessmen interested in such questions. The meetings aim to counteract any tendency to particularism which geographical separation and diverse interests might otherwise foster.

The publications of the Association were begun in March, 1886. The first series of eleven volumes was completed by a general index in 1897. The second series, comprising two volumes, was published in 1897-99, and in addition thereto the Association issued during 1896-99 four volumes of *Economic Studies*. In 1900 a third series of quarterly publications was begun with the Papers and Proceedings of the Twelfth Annual Meeting, and was continued through 1910. *The Economic Bulletin,* issued quarterly and devoted to bibliography and current notes, was also published by the Association during the three years, 1908, 1909, and 1910.

In 1911 the Association began publishing the *American Economic Review,* a quarterly journal devoted to articles on economic subjects, reviews, abstracts of articles in current journals, and a classified bibliography of economic publications. During the twenty-nine years of its existence, the *Review* has made a place for itself among the scientific journals of the country.

The American Economic Association is the organ of no party, sect, or institution. It has no creed. Persons of all shades of economic opinion are found among its members, and widely different views are given a hearing in its annual meetings and through its publications.

With the exception of the editor of the *American Economic Review* and the Secretary-Treasurer, the officers of the Association receive no remuneration for their services. Its entire receipts are expended for the editing, printing, and circulation of the publications and for the annual meetings.

CHARTER AND BYLAWS OF THE AMERICAN ECONOMIC ASSOCIATION

The charter of incorporation of the American Economic Association, incorporated in the District of Columbia, February 3, 1923, provides as follows:

I. The name of title by which the society shall be known is the American Economic Association.

II. The time for which it is organized is perpetual.

III. The particular business and object of the society are as follows:

1. The encouragement of economic research, especially the historical study of the actual conditions of industrial life;

2. The issue of publications on economic subjects;

3. The encouragement of perfect freedom of economic discussion. The Association as such will take no partisan attitude, nor will it commit its members to any position on practical economic questions.

IV. The number of its trustees for the first year of its existence shall be fourteen.

The following bylaws have been adopted for the government of the Association:

I. Membership

1. Any person interested in economic inquiry may, on the nomination of a member, be enrolled in this Association.

2. There shall be four classes of members other than honorary; members paying an annual fee of $5.00; subscribing members paying an annual fee of $10.00; contributing members paying an annual fee of $25.00 or more; and life members comprising those members who contribute $200.00 or more in a single payment. Life members shall be exempt from annual fees. Members shall have each year the privilege of designating the class of membership they choose for that year.

3. Foreign economists of distinction, not exceeding twenty-five in number, may be elected honorary members of the Association.

4. Every member is entitled to receive, as they appear, all reports and publications of the Association.

II. Trustees

The trustees of this Association shall not be less than fourteen or more than fifteen in number, and the Board of Trustees shall be known as the Executive Committee. The Board of Trustees shall be composed of the persons elected as the Executive Committee at the time and place and in the manner set forth in the following bylaw providing for the election of officers.

III. Officers[1]

1. The Association shall have the following officers who shall be elective officers: A President, two Vice-Presidents, six elected members of the Executive Committee, three representatives on the Social Science Research Council and two representatives on the American Council of Learned Societies. The terms of office of the President and Vice-Presidents shall each be one year. The terms of office of the six elected members of the Executive Committee and of the three representatives on the Social Science Research Council shall each be three years, two of the six terms of the six elected members of the Executive Committee and one of the three terms of the three representatives on the Social Science Research Council to expire each year. The terms of office of the two representatives on the American Council of Learned Societies shall each be four years, and one of these terms shall expire each second year. Each regular term of office shall coincide with a calendar year or a multiple thereof.

2. As early in each year as practicable, the President of the Association shall appoint a Nominating Committee, consisting of a former president, as chairman, and not less than five other members of the Association. The names of the Committee shall be published in the March or June issue of

[1] Amendment as adopted at the annual meeting, December 29, 1933.

the *American Economic Review* with an invitation to the general membership that suggestions of nominees for the various offices be sent to the chairman of the Committee. The Nominating Committee shall be instructed to present to the Secretary of the Association on or before September 1[2] of each year two or more nominations for each elective office to be filled, the nominees being members of the Association.

3. Elective officers shall be chosen through elections to be held during the last three[1] months of the term of office of his predecessor. Each member shall be given the opportunity to vote by mail. The results of the election shall be certified and announced by the Secretary at the annual business meeting.

4. The Association shall have the following officers who shall be appointed by the Executive Committee: A Secretary, a Treasurer, a Managing Editor, and a Counsel. The terms of office of each of these officers shall be three calendar years. The Managing Editor shall, with the advice and consent of the Executive Committee, appoint members to an Editorial Board to assist him. The President may, at his discretion and with the advice and consent of the Executive Committee, appoint a Program Committee.

5. The Executive Committee shall consist of the President, the Vice-Presidents, the Secretary, the Treasurer, the Managing Editor, the three ex-Presidents who have last held office, and six elected members, provided that the Secretary, the Treasurer, and the Managing Editor shall not be entitled to vote in the Committee's meetings.

IV. Duties of Officers

1. The President of the Association shall preside at all meetings of the Association and of the Executive Committee, and in consultation with the Program Committee, shall prepare the programs for the annual meetings. In case of his disability, his duties shall devolve upon the Vice-Presidents in the order of their election, upon the Secretary, and upon the Treasurer.

2. The Secretary shall keep the records of the Association and perform such other duties as the Executive Committee may assign to him.

3. The Treasurer shall receive and have the custody of the funds of the Association, subject to the rules of the Executive Committee.

4. The Executive Committee shall have the control and management of the funds of the corporation. It may fill vacancies in the list of officers, and may adopt any rules or regulations for the conduct of its business not inconsistent with this constitution or with rules adopted at the annual meeting. It shall act as a committee on time and place of meetings and perform such other duties as the Association shall delegate to it. A quorum shall consist of five members.

5. The Editorial Board shall have charge of the publications of the Association. The Managing Editor shall be ex officio member and chairman of the Editorial Board.

6. The office of the corporation for legal purposes shall be at the office of the Counsel in the District of Columbia, and legal process against the corporation may be served on said Counsel.

V. Annual Meeting

The annual meeting of this corporation shall be held at such time and place as may be determined by the Executive Committee. Notice of such time and place shall be given by publication in the regular journal of the corporation, now known as the *American Economic Review,* at least ten days prior to such meeting. The first annual meeting shall be held at Providence, Rhode Island, on the 27th of December, 1923, at nine o'clock A.M., unless otherwise ordered by the Executive Committee.

VI. Amendments

Amendments, after having been approved by a majority of the Executive Committee present at a meeting regularly called, may be adopted by a majority vote of the members present at any regular meeting of the Association.

[2] As amended at the December 29, 1938, annual meeting.

EDITORIAL NOTE

The present edition of the biennial handbook of the Association contains the following information: lists of officers, past and present, charter and bylaws of the Association, a directory of members, as of May 15, 1940, a geographical enumeration of members and subscribers (with addresses), and statistical summaries.

The 1938 edition of the handbook, *Who's Who in the American Economic Association,* contained the following additional information concerning the personnel of our membership: affiliation and rank or position, academic degrees, title of doctoral dissertation (with publication date), fields of specialization, research projects under way, and samples of representative publications. An effort was made to increase the usefulness of this information by classifying members according to the categories currently used in the *American Economic Review* for book and periodical reviews, doctoral dissertation lists, etc. This classification did not prove feasible. Hence it was decided this year to postpone revising the special purpose "who's who" handbook until further progress has been made in perfecting more practicable groupings of fields of specialization. When this has been accomplished, it will be possible to make up specialized lists of economists in the several fields, as well as to publish subject-author indexes of articles and papers included in our publications. In the meantime, the specialized data referred to above is being collected in our files for all new members.

Balloting by mail has served to revive an interest in the geographical distribution of our membership. The referendum of March, 1939, on the choice of the Association's annual meeting place prompted a compilation of members by states and regions. In addition to the list of members and subscribers, we present in the present volume an up-to-date geographical analysis.

Our Association is directly represented on the Social Science Research Council, the American Council of Learned Societies, and the National Bureau of Economic Research. Names of our representatives and of other officers and members of these organizations are presented.

Also of interest to our membership is the information contained at the end of the volume concerning the organization and activities of three regional economic associations with which many of our members are affiliated; namely, the Mid-West Economic Association, the Southern Economic Association, and the Pacific Coast Economic Association.

The increasing amount and variety of inquiries received by this office prompt the Editor to include in this note the following summary of published sources of information concerning the activities of the Association:

1. *The American Economic Review*—a quarterly publication containing main articles, book reviews, bibliographical and personal notes, records of special investigations by individuals and public commissions.
2. *The Proceedings* of the annual meetings of the Association (edited by the Secretary), published as a supplement to the March numbers of the *Review*—main papers, round table summaries, together with reports of the Secretary, the Treasurer, the Editor, Finance Committee, Auditor, standing and special committees, minutes of the Executive Committee and of the business meetings. The appendix contains a cumulative list of the contents of the proceedings from 1911 and the publications of the Association since 1886.

3. *The Handbook*—a biennial publication, usually in the form of a directory containing names and addresses of members together with the year from which dates their continuous membership. In 1938 a specialized "who's who" was issued, containing information concerning the interests and activities of our members. The 1905 Handbook contained brief biographical sketches of members.
4. *Information Booklet*—describing the purposes, organization, and activities of the Association, designed to answer inquiries from prospective members. Sent free upon request.

JAMES WASHINGTON BELL, *Secretary*

HONORARY MEMBERS

Note: The figures in italics indicate the year of election to honorary membership.

Albert Aftalion *1938*

C. F. Bastable *1926*

James Bonar *1924*

Arthur L. Bowley *1932*

Gustav Cassel *1929*

David Davidson *1938*

L. Einaudi *1926*

Bèla Földes *1927*

Eli Heckscher *1938*

John A. Hobson *1938*

Gaston Jèze *1926*

John M. Keynes *1932*

Sir Walter Thomas Layton *1932*

A. Loria *1926*

Arthur Cecil Pigou *1922*

Charles Rist *1922*

D. H. Robertson *1938*

Werner Sombart *1929*

Arthur A. C. Spiethoff *1932*

Sidney Webb (Lord Passfield) *1929*

LIST OF MEMBERS

*Life members †Contributing members §Subscribing members ‡Honorary members

NOTE: *The figures in italics after the name of a member indicate the year from which dates his continuous membership.*

Abbott, Charles C., Harvard Univ., Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. *1928*
Abbott, Edith, Univ. of Chicago, Soc. Sci. Res. Bldg., Chicago, Ill. *1905*
Abbott, William J., Jr., 438 S. Hanley Rd., St. Louis, Mo. *1939*
Abrahamson, Albert, 76 Federal St., Brunswick, Me. *1927*
Abramovitz, Moses, 452 Riverside Dr., New York, N.Y. *1936*
Abramson, A. Victor, Brookings Inst., 744 Jackson Pl., Washington, D.C. *1939*
Achinstein, Asher, 1050 Park Pl., Brooklyn, N.Y. *1922*
Ackley, Gardner, Ohio State Univ., Dept. of Econ., Columbus, Ohio. *1938*
Adams, Arthur B., Univ. of Oklahoma, Norman, Okla. *1923*
Adams, George P., Jr., 730 Spruce St., Berkeley, Calif. *1938*
Adams, James P., Brown Univ., Providence, R.I. *1921*
Adams, Leonard P., 75 Willett St., Albany, N.Y. *1930*
Adams, Leonard W., Syracuse Univ., School of Bus. Admin., Syracuse, N.Y. *1927*
Adams, Thomas C., 242 S. 12th East St., Salt Lake City, Utah. *1929*
Adams, Walter S., 628 Logan St., Chillicothe, Ill. *1926*
Adamson, Raymond K., 347 W. Dayton St., Madison, Wis. *1934*
‡**Aftalion,** Albert, 60 rue Michel Ange, Paris (16), France. *1938*
Agger, Eugene E., Rutgers Univ., Dept. of Econ., New Brunswick, N.J. *1902*
Aikin, Newton J., 2001 Monroe St., Pullman, Wash. *1927*
Aitchison, Beatrice, Univ. of Oregon, Dept. of Econ., Eugene, Ore. *1940*
§**Akerman,** Clement, Reed Col., Portland, Ore. *1914*
Akerstrom, Clarence E., 36 Church St., Poultney, Vt. *1936*
Alderfer, Evan B., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1934*
Alderson, Wroe, Curtis Publishing Co., Philadelphia, Pa. *1939*
Alexander, Charles K., 2019 University Ave., Madison, Wis. *1940*
Alivia, Gavino, Via Cagliari 2, Sassari, Italy. *1934*
Allardt, Irma M., 468 E. 5th St., Mt. Vernon, N.Y. *1940*
Allen, Edward D., Iowa State Col., 114 Engineering Hall, Ames, Iowa. *1939*
Allen, Edward J., 378 College Rd., Orono, Me. *1922*
Allen, Harland H., 10 S. La Salle St., Chicago, Ill. *1928*
Allen, Harry K., Univ. of Illinois, 321 Com. Bldg., Urbana, Ill. *1936*
Allen, Ruth A., Univ. Sta., Austin, Tex. *1928*
Alm, I. W., Indiana Univ., School of Bus. Admin., Bloomington, Ind. *1937*
Alsberg, Carl L., Univ. of California, Giannini Hall, Rm. 207, Berkeley, Calif. *1934*
Altman, Oscar L., S.E.C., Washington, D.C. *1930*
Altschul, Eugen, Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1934*
Alyea, Paul E., 712 11th St., Tuscaloosa, Ala. *1928*
Amberg, Alfred A., 12 Cleveland Rd., New Haven, Conn. *1940*
Amos, James E., Univ. of Pittsburgh, Pittsburgh, Pa. *1928*
Andersen, Arthur, 135 S. La Salle St., Chicago, Ill. *1913*
Anderson, Benjamin M., Jr., Univ. of California at Los Angeles, Los Angeles, Calif. *1911*
Anderson, Clay J., Central Missouri State Teachers Col., Warrensburg, Mo. *1928*
Anderson, David F., 247 Canterbury Rd., Westfield, N.J. *1934*
Anderson, Don S., 2214 Chadbourne Ave., Madison, Wis. *1938*
Anderson, Hugo A., 462 Bergen St., Brooklyn, N.Y. *1940*
Anderson, Kurt, 680 Merrick, Detroit, Mich. *1939*
Anderson, Paul E., United Mine Workers of America, 15 and I Sts., N.W., Washington, D.C. *1938*
Anderson, Sven A., 2226 Burdett Ave., Troy, N.Y. *1931*
Anderson, Thomas J., Jr., New York Univ., School of Com., Washington Sq., New York, N.Y. *1922*
Andress, Allen E., Box 164, Hiram, Ohio. *1934*
Andrew, Seymour L., American Tel. and Tel. Co., 195 Broadway, New York, N.Y. *1918*
Andrews, Benjamin R., Columbia Univ., Teachers Col., New York, N.Y. *1917*
Andrews, John B., 131 E. 23rd St., New York, N.Y. *1910*

Andrews, William H., Purdue Univ., Dept. of Hist., Econ., and Gov., Lafayette, Ind. *1937*
Andrus, J. Russell, Judson Col., Rangoon, Burma. *1937*
Angell, James W., Columbia Univ., Fayerweather Hall, New York, N.Y. *1924*
Angus, William N., P.O. Box 345, Bedford Hills, N.Y. *1921*
Anson, Charles P., Roanoke Col., Salem, Va. *1930*
Anthony, Donald E., Kent State Univ., Dept. of Bus. Admin., Kent, Ohio. *1923*
Arant, Roscoe, Univ. of Mississippi, Dept. of Econ., University, Miss. *1936*
Arbuthnot, Charles C., 2263 Demington Dr., Cleveland, Ohio. *1904*
Armbruster, Adolph H., Ohio Univ., Athens, Ohio. *1932*
Armstrong, A. B., North Texas Agric. Col., Dept. of Econ., Arlington, Tex. *1938*
Armstrong, Florence A., 2703 Russell Rd., Alexandria, Va. *1923*
Armstrong, Floyd E., Massachusetts Inst. of Tech., Cambridge, Mass. *1917*
***Armstrong,** Henry C., 1012 Palafax St., Pensacola, Fla. *1887*
Armstrong, Ian A., 1191 Euclid Ave., Berkeley, Calif. *1935*
Armstrong, Robert H., 485 Madison Ave., New York, N.Y. *1934*
Arndt, Ernst H. D., Univ. of Pretoria, Pretoria, South Africa. *1923*
Arndt, Karl M., Univ. of Nebraska, Sta. A, Lincoln, Neb. *1925*
Arner, George B. L., 822 Aspen St., N.W., Washington, D.C. *1910*
Arnold, Arthur Z., 133 W. 71st St., New York, N.Y. *1931*
Arthur, Henry B., Swift and Co., General Office, Union Stock Yards, Chicago, Ill. *1940*
Ashburn, Karl E., Southwestern Louisiana Inst., Lafayette, La. *1937*
Ashton, Herbert, 502 Cedar Lane, Swarthmore, Pa. *1928*
Asofsky, Abraham A., 225 Parkside Ave., Brooklyn, N.Y. *1936*
Atkins, Paul M., 199 Inwood Ave., Upper Montclair, N.J. *1915*
Atkins, Willard E., New York Univ., Washington Square Col., New York, N.Y. *1924*
Atkinson, Sterling K., Temple Univ., Philadelphia, Pa. *1930*
Atwood, Albert W., 65 Observatory Circle, Washington, D.C. *1912*
Auerbach, S. Jerome, 686 Alabama Ave., Brooklyn, N.Y. *1939*
Auld, George P., 4 Kenmare Rd., Larchmont, N.Y. *1920*
Aull, George H., Clemson College, S.C. *1928*
Austin, Charles B., 1159 E. Foothill Blvd., Altadena, Calif. *1911*
Austin, William L., Bur. of Census, Washington, D.C. *1924*
Axe, Emerson W., E. W. Axe and Co., Inc., 730 5th Ave., New York, N.Y. *1921*
Aylstock, Earl J., 201 W. 4th St., Cincinnati, Ohio. *1939*
Ayres, Clarence E., Univ. of Texas, Austin, Tex. *1932*
Ayres, Edith, New York Univ., Washington Square Col., New York, N.Y. *1931*
Ayres, Leonard P., Cleveland Trust Co., Cleveland, Ohio. *1921*
Ayres, Milan V., 203 N. Wabash Ave., Chicago, Ill. *1940*

***Babson,** Roger W., Babson's Statis. Organization, Washington St., Wellesley Hills, Mass. *1910*
Backman, Jules, 163 Ocean Ave., Brooklyn, N.Y. *1935*
Bacon, Marvin A., Univ. of Michigan, Bur. of Gov., Haven Hall, Ann Arbor, Mich. *1937*
Bader, Louis, New York Univ., School of Com., Washington Sq. E., New York, N.Y. *1925*
Badger, Ralph E., Investment Counsel, Inc., Union Guardian Bldg., Detroit, Mich. *1921*
Badulesco, Victor V., Str. Maria Rosetti, No. 17, Bucarest III, Rumania. *1926*
Baehne, George W., P.O. Box 136, Darien, Conn. *1933*
Baer, Werner, 825 W. End Ave., New York, N.Y. *1938*
Baer, Willis N., 528 N. Florida Ave., De Land, Fla. *1937*
Bagge, Gösta, Skinnarviksringen 16, Stockholm, Sweden. *1904*
Bagley, Eleanor S. (Mrs.), Laurence Brook Manor, East Brunswick, N.J. *1937*
Bagley, William C., Jr., Rutgers Univ., Econ. Dept., New Brunswick, N.J. *1936*
Bailer, Lloyd H., 6053 30th St., Detroit, Mich. *1938*
Bailey, Robert W., Univ. of Akron, Akron, Ohio. *1940*
Bailey, William B., 52 W. Hill Dr., West Hartford, Conn. *1901*
Baird, Frieda, 1830 R St., N.W., Apt. 62, Washington, D.C. *1926*
Baker, Carl O., Schneider Vocational High School, Stockton, Calif. *1926*
Baker, Elizabeth F. (Mrs.), Columbia Univ., Barnard Col., New York, N.Y. *1921*
Baker, George P., 10 Coolidge Hill Rd., Cambridge, Mass. *1928*
Baker, Gladden W., 700 Main St., Hartford, Conn. *1919*
Baker, Harold B., Friends Univ., Wichita, Kan. *1936*

Baker, John W., 50 Broad St., New York, N.Y. *1911*
Baker, Oliver P., 15478 Pinehurst, Detroit, Mich. *1928*
Baker, Warren J., University Club, 803 State St., Madison, Wis. *1931*
Bakke, E. Wight, Yale Univ., Dept. of Econ., New Haven, Conn. *1939*
Bakken, Henry H., Univ. of Wisconsin, Col. of Agric., Madison, Wis. *1930*
Balcom, Bayles R., U. S. Steel Corp., 436 7th Ave., Pittsburgh, Pa. *1939*
Balderston, C. Canby, Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1935*
Baldwin, Claude D., Univ. of Illinois, 226 Com. Bldg., Urbana, Ill. *1939*
Ballaine, Wesley C., 5541 Kimbark Ave., Chicago, Ill. *1939*
Ballard, Margaret L., 1745 K St., N.W., Washington, D.C. *1940*
Ballinger, Roy A., Louisiana State Univ., University, La. *1933*
Bancroft, E. Clair, Colgate Univ., Econ. Dept., Hamilton, N.Y. *1919*
Bancroft, Gertrude, 761 Millbrook Lane, Haverford, Pa. *1935*
Barkas, Benjamin W., 5907 Kemble Ave., Philadelphia, Pa. *1923*
§**Barnard,** Chester I., 540 Broad St., Newark, N.J. *1934*
§**Barnes,** Charles M., U. S. Dept. of State, Washington, D.C. *1913*
Barnes, Gilbert H., 115 Montrose Ave., Delaware, Ohio. *1932*
Barnes, Horace R., Franklin and Marshall Col., Dept. of Econ. and Bus. Admin., Lancaster, Pa. *1923*
Barnes, Irston R., 93A Yale Sta., New Haven, Conn. *1928*
Barnes, Lillian (Mrs.), 3133 Connecticut Ave., N.W., Washington, D.C. *1940*
Barnett, Paul, Univ. of Tennessee, Knoxville, Tenn. *1938*
Barnwell, George W., Stevens Inst. of Tech., Hoboken, N.J. *1935*
Barr, Andrew, 2000 Connecticut Ave., N.W., Washington, D.C. *1928*
Barrett, Don C., R.R. 7, Box 490, Indianapolis, Ind. *1895*
Bartels, Robert D. W., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1936*
Bartlett, C. A., Post Box 26, Zanzibar, Africa. *1933*
Bartlett, Roland W., 219 New Agric. Bldg., Urbana, Ill. *1931*
***Baruch,** B. M., 597 Madison Ave., New York, N.Y. *1913*
Baska, Louis M., St. Benedicts Col., Atchison, Kans. *1935*
Bass, Lawrence W., Mellon Inst. of Indus. Res., Pittsburgh, Pa. *1930*
‡**Bastable,** C. F., 52 Brighton Rd., Rathgar Dublin, Ireland. *1926*
Batchelor, Joseph A., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1932*
Bauer, John, American Public Utilities Bur., 280 Broadway, New York, N.Y. *1910*
Baugh, Russell H., Oklahoma A. and M. Col., Dept. of Econ., Stillwater, Okla. *1932*
Baumert, Watson A., Shellball Apt., Kew Gardens, L.I., N.Y. *1927*
Baxter, Robert J., Univ. of Pittsburgh, 2332 Cathedral of Learning, Pittsburgh, Pa. *1939*
Bayard, C. Crowell, Clark, Sinsabaugh and Co., Chrysler Bldg., New York, N.Y. *1939*
Baysinger, Reaves H., Box 89, Dewitt, N.Y. *1933*
Beach, E. F., Scarsdale Manor Apts., Scarsdale, N.Y. *1939*
Beach, W. Edwards, 3520 77th St., Jackson Heights, N.Y. *1926*
Beadles, William T., Illinois Wesleyan Univ., Dept. of Econ., Bloomington, Ill. *1931*
Beales, Le Verne, 4124 5th St., N.W., Washington, D.C. *1925*
Bearnson, J. B., Univ. of Utah, Salt Lake City, Utah. *1939*
Beatty, Willard C., Brown Univ., Dept. of Econ., Providence, R.I. *1923*
Beaty, Earl, Emmanuel Missionary Col., Berrien Springs, Mich. *1939*
Becker, Nathan M., Univ. of Toledo, Dept. of Econ., Toledo, Ohio. *1936*
Beckett, Grace L., Indiana Central Col., New Hall, Indianapolis, Ind. *1936*
Beckhart, Benjamin H., Columbia Univ., 406 School of Bus., New York, N.Y. *1922*
Beckman, Theodore N., Ohio State Univ., Col. of Com. and Journ., Columbus, Ohio. *1921*
Beckner, Earl R., 111 George Mason Dr., Apt. 1, Arlington, Va. *1924*
Beede, Kenneth C., 4 Cleave Dr., Falls Church, Va. *1939*
Behling, Burton N., I.C.C., Washington, D.C. *1934*
Behringer, Edward N., North Texas Agric. Col., Dept. of Soc. Sci., Arlington, Tex. *1934*
Bekker, Konrad, 222 Waller Ave., Lexington, Ky. *1939*
Belcher, Alice E., Milwaukee-Downer Col., Milwaukee, Wis. *1910*
Belcher, Donald R., 195 Broadway, New York, N.Y. *1921*
***Bell,** James C., Locust Valley Rd., Brookville, L.I., N.Y. *1922*
Bell, James Washington, 1745 Chicago Ave., Evanston, Ill. *1916*
Bell, John F., Temple Univ., Philadelphia, Pa. *1927*

Bell, Raymond E., 205 E. 42nd St., New York, N.Y. *1924*

Bell, Spurgeon, Brookings Inst., 722 Jackson Pl., Washington, D.C. *1925*

Bellemore, Douglas H., Univ. of Toledo, Toledo, Ohio. *1938*

§**Beller,** William C., 18 W. 85th St., New York, N.Y. *1937*

Belmore, Carl W., 24 Elm St., Wakefield, Mass. *1936*

Beltran, Pedro G., 30 Exchange St. E., Liverpool 2, England. *1938*

Bender, Wesley C., Univ. of Notre Dame, Notre Dame, Ind. *1937*

Bendiner, Irvin, 942 Widener Bldg., Philadelphia, Pa. *1934*

Benedict, Murray R., Univ. of California, Giannini Found., Berkeley, Calif. *1928*

Bengston, Karl J., Salinas Junior Col., Salinas, Calif. *1938*

Benner, Claude L., Continental American Life Ins. Co., 2024 du Pont Bldg., Wilmington, Del. *1922*

Bennett, Philip A., 150 N. Day St., Orange, N.J. *1936*

Bennett, Virgil E., Bennett and Co., 200 Beaver St., Beaver, Pa. *1936*

Bennett, William W., Union Col., Schenectady, N.Y. *1921*

Bent, Joseph G., Jr., 19 Congress St., Boston, Mass. *1937*

Berger, Adolph O., 1446 E. 110th St., Cleveland, Ohio. *1934*

Berglund, Abraham, Box 1606, Univ. Sta., Charlottesville, Va. *1906*

Bergson (Burk), Abram, Kirkland H-14, Harvard Univ., Cambridge, Mass. *1937*

Bermingham, Edward J., 231 S. La Salle St., Chicago, Ill. *1934*

Bermudez, Jorge, Univ. of Puerto Rico, Rio Piedras, Porto Rico. *1932*

Bernfield, Frederick M., Citadel Sta., Charleston, S.C. *1937*

Bernhardt, Joshua, 6800 Brookville Rd., Chevy Chase, Md. *1920*

Bernheim, George B., 300 Observer Highway, Hoboken, N.J. *1916*

Bernstein, Edward M., Univ. of North Carolina, Chapel Hill, N.C. *1935*

Bernstein, Louis M., R. H. Macy and Co., New York, N.Y. *1932*

Berridge, William A., Metropolitan Life Ins. Co., 1 Madison Ave., New York N.Y. *1921*

Berry, Thomas S., Box 4703, Duke Sta., Durham, N.C. *1933*

Bertram, Rudolf F., 3017 Kenilworth Lane, Knoxville, Tenn. *1937*

Best, Harry, Univ. of Kentucky, Lexington, Ky. *1936*

Bethke, William, La Salle Extension Univ., 4046 Michigan Ave., Chicago, Ill. *1919*

Bezanson, Anne, Room 26, 3440 Walnut St., Philadelphia, Pa. *1918*

Bice, Hubert E., Syracuse Univ., Syracuse, N.Y. *1917*

Biddle, Clinton P., Orchard Ave., R.R., Auburndale, Mass. *1925*

Bidgood, Lee, University, Ala. *1911*

Bidwell, Percy W., 34 Chase Rd., Scarsdale, N.Y. *1912*

Bigelow, Howard F., Western State Normal, Kalamazoo, Mich. *1927*

Bigelow, Karl W., American Council on Education, 744 Jackson Pl., N.W., Washington, D.C. *1925*

Bigge, George E., 7 Inverness Dr., Chevy Chase, Md. *1931*

Bigham, Truman C., Univ. of Florida, Gainesville, Fla. *1928*

Billig, William C., Univ. of Southern California, Col. of Com., Los Angeles, Calif. *1936*

Billings, Arthur G., 37 Hawthorn St., Cambridge, Mass. *1940*

***Bing,** Alexander M., 18 E. 48th St., New York, N.Y. *1919*

Bird, Dillard E., Univ. of Pennsylvania, 103 Logan Hall, Philadelphia, Pa. *1938*

Bird, Francis H., Univ. of Cincinnati, Col. of Eng. and Com., Cincinnati, Ohio. *1909*

Biscoe, Alvin B., 114 S. 4th St., Lewisburg, Pa. *1937*

Bishop, Philip W., 173 Lawrence St., New Haven, Conn. *1940*

Bishop, Ward L., Lehigh Univ., Col. of Bus. Admin., Bethlehem, Pa. *1932*

Bissell, Richard M., Jr., 1292 Yale Sta., New Haven, Conn. *1936*

Bittermann, Henry J., Ohio State Univ., Dept. of Econ., Columbus, Ohio. *1928*

Black, Albert G., U. S. Dept. of Agric., Farm Credit Admin., Washington, D.C. *1925*

Black, Henry R. E., Owens-Corning Fiberglas Corp., Toledo, Ohio. *1940*

Black, John D., Harvard Univ., Littauer School of Pub. Admin., Cambridge, Mass. *1919*

Blackburn, Burr, Household Finance Corp., 919 N. Michigan Ave., Chicago, Ill. *1929*

Blackburn, Raymond F., Univ. of Pittsburgh, Dept. of Statistics, Pittsburgh, Pa. *1939*

Blackstone, Alva E., 121 Walnut Ave., Wayne, Pa. *1935*

Bladen, Vincent W., Univ. of Toronto, 273 Bloor St. W., Toronto, Ont., Canada. *1924*

Blaine, Emmons (Mrs.), 101 E. Erie St., Chicago, Ill. *1910*

Blaine, James C. D., Univ. of North Carolina, 312 Bingham Hall, Chapel Hill, N.C. *1940*

Blair, Jacob J., 765 Gypsy Lane, Country Club Heights, Mt. Lebanon, Pa. *1935*
Blake, Edwin M., Drawer A, Pratt Sta., Brooklyn, N.Y. *1909*
Blakey, Roy G., 1115 River Rd. E., Minneapolis, Minn. *1912*
Blanchard, John D., Groton, Tompkins Co., N.Y. *1930*
Blanchard, Ralph H., Columbia Univ., New York, N.Y. *1912*
Blaser, Arthur F., Jr., 512 W. 122nd St., New York, N.Y. *1940*
Bliss, Charles A., Lincoln, Mass. *1928*
Bliss, Z. W., Box 156, Providence, R.I. *1912*
Bloch, Henri S., Univ. of Chicago, Dept. of Econ., Chicago, Ill. *1938*
Blodgett, Ralph H., Univ. of Illinois, Dept. of Econ., Urbana, Ill. *1935*
Bloomberg, Lawrence N., American Bankers Asso., Washington Bldg., Washington, D.C. *1935*
Bloomfield, Arthur I., 4378 Western Ave., Montreal, Que., Canada. *1938*
Bloomfield, Daniel, 80 Federal St., Boston, Mass. *1934*
Blough, J. Roy, East Falls Church, Va. *1924*
Blum, Jay W., Gambier, Ohio. *1937*
Boals, Gordon P., U. S. Dept. of Agric., Office of For. Agric. Rela., Bur. of Agric. Econ., Washington, D.C. *1929*
Boatwright, John W., P.O. Box S, 910 S. Michigan Ave., Chicago, Ill. *1931*
Bober, Mandell M., Lawrence Col., Appleton, Wis. *1927*
Bober, William C., Johns Manville Corp., 22 E. 40th St., New York, N.Y. *1939*
Bodde, Leo A., Rockhurst Col., 5225 Troost Ave., Kansas City, Mo. *1939*
Boddy, Francis M., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1934*
Bodfish, Morton, 333 N. Michigan Ave., Chicago, Ill. *1926*
Bodman, Henry T., Nat. Bank of Detroit, Trust Dept., Detroit, Mich. *1938*
Boehmler, Erwin W., Central Y.M.C.A. Col., 19 S. La Salle St., Chicago, Ill. *1939*
Boer, Arend E., Univ. of Pittsburgh, Pittsburgh, Pa. *1937*
Boettler, Herbert F., 630 Vassar Ave., University City, Mo. *1922*
Bogart, Ernest L., 35 E. 9th St., New York, N.Y. *1897*
Bogen, Jules I., 315 W. 106th St., New York, N.Y. *1931*
Boggs, Theodore H., Stanford University, Calif. *1935*
Bohan, Richard T., 2843 Fenwood Ave., Terre Haute, Ind. *1938*
Bohlman, Herbert W., Drake Univ., Des Moines, Iowa. *1924*
Bohn, Carl, 331 Bement Ave., Staten Island, N.Y. *1936*
Bolden, Norman R., 309 Carmel St., Charlotte, N.C. *1932*
‡**Bonar,** James, 13 Redington Rd., Hampstead, London, N.W. 3, England. *1924*
Bonbright, James C., Columbia Univ., School of Bus., New York, N.Y. *1915*
Bond, Floyd A., Univ. of Michigan, Econ. Dept., Ann Arbor, Mich. *1939*
Boner, J. Russell, Univ. of Alabama, Com. Bldg., University, Ala. *1937*
Bonnell, Allen T., Univ. of North Carolina, School of Com., Chapel Hill, N.C. *1936*
Bonnett, Clarence E., Tulane Univ., New Orleans, La. *1936*
Boone, Gladys, Sweet Briar Col., Sweet Briar, Va. *1928*
Boord, H. O., 305 Wilson Ave., Washington, Pa. *1937*
Bopp, Karl R., Univ. of Missouri, 106 B. and P. A. Bldg., Columbia, Mo. *1936*
Borak, Arthur M., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1927*
Borden, Neil H., Morgan Hall, Soldiers Field, Boston, Mass. *1925*
Bornemann, Alfred, 1618 Jefferson Ave., Brooklyn, N.Y. *1939*
Borth, Daniel, Jr., University, La. *1935*
Bortz, Nelson M., The Four Gables, Cabin John, Md. *1932*
Bosland, Chelcie C., Brown Univ., Dept. of Econ., Providence, R.I. *1925*
Bothwell, Wilber C., Washington Univ., Dept. of Econ., St. Louis, Mo. *1937*
Boudin, Louis B., 20 W. 43rd St., New York, N.Y. *1912*
Bourne, William N., 66 Sparks St., Cambridge, Mass. *1940*
Bowden, Witt, 2032 Belmont Rd., N.W., Washington, D.C. *1931*
Bowen, Howard R., State Univ. of Iowa, Iowa City, Iowa. *1936*
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Bowers, Robert S., Western State Teachers Col., Kalamazoo, Mich. *1937*
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Bowman, Mary J., Iowa State Col., 207 Agric. Annex, Ames, Iowa. *1934*
Bowman, Raymond T., Univ. of Pennsylvania, Dept. of Econ., Philadelphia, Pa. *1929*
Bowman, Ward S., Jr., 2504 41st St., N.W., Washington, D.C. *1937*

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Bradbury, Robert W., Louisiana State Univ., Col. of Com., University, La. *1940*
Braden, Samuel E., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1938*
Bradford, Frederick A., Lehigh Univ., Col. of Bus. Admin., Bethlehem, Pa. *1923*
Bradley, Clifton J., U. S. Dept. of Agric., Kimball Bldg., Parsons, Kans. *1930*
Bradley, Richards M., 60 State St., Boston, Mass. *1912*
Brainard, Harry G., Southern Illinois State Normal Univ., Econ. Dept., Carbondale, Ill. *1935*
Brainerd, Carol P. (Mrs.), R.R. 2, West Chester, Pa. *1936*
Bramble, Harlan P., 509 W. 121st St., New York, N.Y. *1940*
Brand, Charles J., 616 Investment Bldg., Washington, D.C. *1914*
Brandenburg, Samuel J., Clark Univ., Worcester, Mass. *1912*
Brandis, Roland B., Jr., Soc. Sec. Bd., Field Office, Greensboro, N.C. *1940*
Bratt, Elmer C., Lehigh Univ., Dept. of Econ., Bethlehem, Pa. *1928*
Bratter, Herbert M., Marlyn Apts., 3000 39th St., N.W., Washington, D.C. *1935*
Braunthal, Alfred, 39-89 46th St., Long Island City, N.Y. *1939*
Bray, Charles P., First Nat. Bank Bldg., Oshkosh, Wis. *1935*
Bray, William, 402 Oak Ave., Ithaca, N.Y. *1940*
Breckenridge, Walter N., Box 143, Waterville, Me. *1929*
Breckinridge, Frank P., 134 S. La Salle St., Chicago, Ill. *1935*
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Bremer, C. Daniel, 649 Fifth Ave., New York, N.Y. *1930*
Brethouwer, Melvin W., 510 W. 110th St., New York, N.Y. *1936*
Brewster, Maurice R., Georgia Tech., Atlanta, Ga. *1939*
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Bridenstine, Merwyn G., Butler Univ., Indianapolis, Ind. *1930*
Briefs, Goetz A., 4 Kenilworth Dr., Chevy Chase, Washington, D.C. *1938*
Briggs, Leland L., Univ. of Vermont, Dept. of Econ., Burlington, Vt. *1925*
Briggs, Royal J., Kemper Military School, Boonville, Mo. *1935*
Briggs, Robert P., Univ. of Michigan, Econ. Dept., Ann Arbor, Mich. *1928*
Brimacombe, Stuart H., 2970 Sheridan Rd., Chicago, Ill. *1939*
Brisco, Norris A., New York Univ., Washington Sq., New York, N.Y. *1906*
Brissenden, Paul F., Columbia Univ., New York, N.Y. *1921*
Brock, Leslie V., 164 1st Ave., Waynesburg, Pa. *1936*
Bronfenbrenner, Martin, Central Y.M.C.A. Col., Chicago, Ill. *1938*
Brooks, Benjamin F., Butler Univ., Indianapolis, Ind. *1939*
Brooks, Robert P., Univ. of Georgia, School of Com., Athens, Ga. *1920*
Brossard, Edgar B., U. S. Tariff Com., 7th and E Sts., N.W., Washington, D.C. *1937*
Brown, Bonnar, Fed. Res. System, Div. of Security Loans, Washington, D.C. *1938*
Brown, Cecil K., Davidson Col., Davidson, N.C. *1928*
Brown, Courtney C., Whippoorwill, Armonk, N.Y. *1935*
Brown, Douglass V., 15 Griggs Ter., Brookline, Mass. *1932*
Brown, Elmer J., Univ. of Arizona, Tucson, Ariz. *1911*
Brown, Emily C., Vassar Col., Kendrick House, Poughkeepsie, N.Y. *1927*
Brown, George H., Univ. of Chicago, School of Bus., Chicago, Ill. *1940*
Brown, George T., Catholic Univ. of America, Washington, D.C. *1935*
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Buchan, Leslie J., Tulane Univ., New Orleans, La. *1940*
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Buck, Norman S., Yale Sta., New Haven, Conn. *1920*
Buckley, Louis F., Box 124, Notre Dame, Ind. *1939*
Bucknam, Roland F., 159 S. Allen St., Albany, N.Y. *1940*
Budd, Thomas A., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1925*
Buechel, Frederick A., Univ. of Texas, Bur. of Bus. Res., Austin, Tex. *1921*
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Bullock, Roy J., Johns Hopkins Univ., Baltimore, Md. *1930*
Bullock, Theodore T., 2420 R., Lincoln, Neb. *1913*
Bunkhead, Jesse, Sterling Hall, Madison, Wis. *1939*
Bunting, Frederick H., Univ. of North Carolina, Woman's Col., Greensboro, N.C. *1940*
Burbank, Harold H., 41 Fresh Pond Lane, Cambridge, Mass. *1909*
Burdick, E. Douglass, Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1933*
Burdick, Raymond T., Colorado Agric. Col., Fort Collins, Colo. *1923*
Burgess, Eugene W., U. S. Steel Export Co., 30 Church St., New York, N.Y. *1928*
Burgess, Kenneth F., Sidley, McPherson, Austin and Burgess, 11 S. La Salle St., Chicago, Ill. *1922*
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Burhans, Nathaniel C., 1806 Orchard St., Alexandria, Va. *1939*
Burke, Joseph W., P.O. Box 218, Colorado Springs, Colo. *1939*
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Burns, Arthur F., 370 Central Park W., New York, N.Y. *1930*
Burns, Arthur R., Columbia Univ., New York, N.Y. *1938*
Burns, Eveline M. (Mrs.), Columbia Univ., New York, N.Y. *1925*
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Burnstan, Arthur R., Carleton Col., Northfield, Minn. *1937*
Burrill, Cecil L., Sherman Hall, Soldiers Field, Boston, Mass. *1940*
Burris, Edward C., Oklahoma A. and M. Col., School of Com., Stillwater, Okla. *1936*
Burroughs, Roy J., F.H.A., Rental Housing Div., Washington, D.C. *1929*
Bursiek, Ralph C., Univ. of Cincinnati, Com. Dept., Cincinnati, Ohio. *1935*
Burtchett, Floyd F., Univ. of California at Los Angeles, Dept. of Econ., Los Angeles, Calif. *1925*
Burtt, Everett J., Jr., Univ. of Maine, Dept. of Econ. and Soc., Orono, Me. *1940*
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Bushey, J. Hobart, Hunter Col., 68th St. and Lexington Ave., New York, N.Y. *1940*
Bussing, Irvin, Room 1408, 14 Wall St., New York, N.Y. *1935*
Butt, S. McClellan, 1843 Mintwood Pl., N.W., Washington, D.C. *1936*
Butt, William E., 538 E. Hamilton Ave., State College, Pa. *1922*
Buttenheim, Harold S., 470 4th Ave., New York, N.Y. *1933*
Butters, J. Keith, 33 Sacramento St., Cambridge, Mass. *1938*
Bye, Carl R., Syracuse Univ., Dept. of Econ., Syracuse, N.Y. *1934*
Bye, Raymond T., Univ. of Pennsylvania, Philadelphia, Pa. *1920*
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Cady, Elwyn L., 5100 Woodland Ave., Kansas City, Mo. *1931*
Cady, George J., 1571 Wesley Ave., Evanston, Ill. *1927*
Cahill, Marion C., 460 Riverside Dr., New York, N.Y. *1931*
Cahn, Bertram J., B. Kuppenheimer and Co., Inc., Congress and Franklin Sts., Chicago, Ill. *1935*
Cahn, Frances T., 3000 39th St., N.W., Washington, D.C. *1929*

Cahn, Reuben D., 202 Vine Ave., Highland Park, Ill. *1923*
Calder, Philip R., Revere Sugar Refinery, 333 Medford St., Charlestown, Mass. *1934*
Cale, Edward G., University of Richmond, Va. *1937*
Calhoun, Charles P., Ronald Press Co., 15 E. 26th St., New York, N.Y. *1927*
Calhoun, Wilbur P., Univ. of Cincinnati, Cincinnati, Ohio. *1935*
Calkins, Francis J., Univ. of Notre Dame, Notre Dame, Ind. *1934*
Calkins, Robert D., Univ. of California, Dept. of Econ., Berkeley, Calif. *1930*
Cameron, Roy E., State Teachers Col., San Diego, Calif. *1930*
Camp, Chester B., Butler Univ., Dept. of Econ., Indianapolis, Ind. *1930*
Campbell, Claude A., Univ. of Oklahoma, Col. of Bus. Admin., Box 52, Faculty Exchange, Norman, Okla. *1936*
Campbell, F. Newell, 2953 McKinley St., Washington, D.C. *1938*
Campbell, James A., Knox Col., Galesburg, Ill. *1928*
Campbell, Robert A., Vanderbilt Univ., Nashville, Tenn. *1908*
Cance, Alexander E., Massachusetts State Col., Amherst, Mass. *1908*
Canfield, Adelbert J., 40 Inman St., Cambridge, Mass. *1918*
Canning, John B., Box 76, Stanford University, Cal. *1920*
Caplan, Benjamin, Ohio State Univ., Dept. of Econ., Columbus, Ohio. *1935*
***Capp,** Seth B., P.O. Box 2054, Philadelphia, Pa. *1912*
Carey, Robert L., Columbia Univ., 718 Hamilton Hall, New York, N.Y. *1931*
Carlson, Knute E., 5241 42nd St., N.W., Washington, D.C. *1932*
Carlson, Ralph E., P.O. Box 546, Blacksburg, Va. *1939*
Carlson, Ruth I., 491 State St., Albany, N.Y. *1928*
Carlson, Valdemar, Antioch Col., Yellow Springs, Ohio. *1936*
Carlton, Frank T., Case School of Applied Science, Cleveland, Ohio. *1906*
Carmichael, F. L., Univ. of Denver, Bur. of Bus. and Soc. Res., Denver, Colo. *1940*
Carothers, Neil, Lehigh Univ., Bethlehem, Pa. *1927*
Carpenter, Cecil C., Univ. of Kentucky, Col. of Com., Lexington, Ky. *1929*
Carpenter, Charles G., 9313 Montgomery Ave., North Chevy Chase, Md. *1924*
Carpenter, O. F., Nat. Mediation Bd., Washington, D.C. *1939*
Carpenter, Raymond V., 66 Park Ave., New York, N.Y. *1917*
Carpenter, William M., 272 N. Mountain Ave., Upper Montclair, N.J. *1926*
Carr, Hobart C., Univ. of Illinois, 318 Com. Bldg., Urbana, Ill. *1939*
Carr, James A., 1304 Central Nat. Bank Bldg., St. Louis, Mo. *1911*
Carroll, Dudley D., Chapel Hill, N.C. *1916*
Carroll, John M., Bates Col., Lewiston, Me. *1913*
Carroll, Mollie R., 1862 Mintwood Pl., N.W., Washington, D.C. *1922*
Carrothers, William A., 510 Central Bldg., Victoria, B.C., Canada. *1922*
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Carter, Lucian H., Univ. of Kentucky, Col. of Com., Lexington, Ky. *1929*
Carter, William A., Elm St., Norwich, Vt. *1928*
Carter, William H., Jr., Univ. of Connecticut, Storrs, Conn. *1930*
Cartinhour, Gaines T., Hunter Col., 2 Park Ave., New York, N.Y. *1938*
Carver, Thomas N., 226 Palisades Ave., Santa Monica, Calif. *1893*
Case, Harold C. M., Univ. of Illinois, Dept. of Agric. Econ., Urbana, Ill. *1919*
Caskey, Wayne F., 2312 S. Nash St., Arlington, Va. *1933*
‡**Cassel,** Gustav, Djursholm, Sweden. *1929*
Cassels, John M., Stephens Col., Inst. for Consumer Educa., Columbia, Mo. *1939*
Cassidy, Harry M., Univ. of California, Dept. of Soc. Welfare, Berkeley, Calif. *1939*
Catlin, Warren B., Bowdoin Col., Brunswick, Me. *1909*
Cave, Roy C., San Francisco State Col., Waller and Buchanan Sts., San Francisco, Calif. *1928*
Cavin, James P., 1301 Vermont Ave., N.W., Washington, D.C. *1940*
Cawthorn, Delmas R., 216 N. University Ave., Oxford, Ohio. *1939*
Center, Charles C., Sterling Hall, Madison, Wis. *1938*
Chace, James E., Jr., Univ. of Florida, Peabody Hall, Gainesville, Fla. *1930*
Chadbourne, Walter W., Univ. of Maine, Orono, Me. *1939*
Chakerian, Charles G., Connecticut Col., New London, Conn. *1939*
Chalkley, H. O., British Embassy, Washington, D.C. *1932*
Chalmers, Henry, Bur. of For. and Dom. Com., Washington, D.C. *1918*
Chamberlin, Edward H., 4 Channing St., Cambridge, Mass. *1928*
Chamberlin, Vell B., 316 Taylor Ave., Glen Ellyn, Ill. *1929*

Chambers, Raymond, Univ. of Buffalo, Edmund Hayes Hall, Buffalo, N.Y. *1922*
Chancellor, William E., Xavier Univ., Col. of Lib. Arts, Cincinnati, Ohio. *1934*
Chandler, Henry A. E., 35 Nassau St., New York, N.Y. *1909*
Chandler, Lester V., Amherst Col., Amherst, Mass. *1939*
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Chapman, Herman H., University, Ala. *1922*
Chapman, John M., Columbia Univ., School of Bus., New York, N.Y. *1920*
§**Chapman,** William P., Jr., 71 Cushman Rd., Scarsdale, N.Y. *1910*
Chase, Charles H., Westchester Apts. 41-B, Washington, D.C. *1916*
Chase, Harvey S., Winter Park, Fla. *1935*
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Chenault, Lawrence R., 3728 86th St., Jackson Heights, L.I., N.Y. *1938*
Cheney, Coleman B., Skidmore Col., Saratoga Springs, N.Y. *1928*
Cherington, Charles R., 3 Phillips Pl., Cambridge, Mass. *1939*
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Cherrington, Homer, Iowa City, Iowa. *1923*
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Childs, James B., Lib. of Congress, Washington, D.C. *1925*
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Chinlund, Edwin F., 67 Wall St., New York, N.Y. *1924*
Chisholm, John W., Jr., Box 1106, University, Ala. *1939*
Christenson, Carroll L., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1925*
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Clark, Evans, 330 W. 42nd St., New York, N.Y. *1932*
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Clark, Fred E., 1602 Ashland Ave., Evanston, Ill. *1914*
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Clark, Ralph N., 32 Longview Dr., Longmeadow, Mass. *1940*
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Clark, Victor S., Lib. of Congress, Washington, D.C. *1906*
Clark, Walter E., Univ. of Nevada, Reno, Nev. *1902*
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Clarke, George B., Univ. of Connecticut, Storrs, Conn. *1931*
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Clayton, W. L., Anderson, Clayton and Co., Houston, Tex. *1934*
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Clemen, Rudolf A., 127 Brookside Dr., Chevy Chase, Md. *1924*
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Cleveland, William C., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1922*
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Cochran, Harry A., Temple Univ., Philadelphia, Pa. *1931*

Coffeen, Elmer R., 192-20 104th Ave., Hollis, N.Y. *1934*
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Cohen, Frank, 88 Central Park W., New York, N.Y. *1939*
Cohen, Harry L., 1114 E. 38th St., Brooklyn, N.Y. *1922*
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Cooley, Henry B., P.O. Box 349, Morgantown, W.Va. *1938*
Coombs, Philip H., 14 Gilman St., Holyoke, Mass. *1939*
Coons, Arthur G., Claremont Col., Claremont, Calif., *1920*
Cooper, Howard E., Johns Hopkins Univ., Baltimore, Md. *1940*
Cooper, Lyle W., N.L.R.B., Washington, D.C. *1927*
Cooper, Vernom, Eastern Montana Normal School, Billings, Mont. *1939*
Cooper, Walter W., 177 Hillcrest Rd., Berkeley, Calif. *1920*
Copeland, Melvin T., 324 Morgan Hall, Soldiers Field, Boston, Mass. *1909*
Copeland, Morris A., Central Statis. Bd., 430 State Dept. Bldg., Washington, D.C. *1921*
§**Coppock,** Joseph D., Univ. of California, Dept. of Econ., Berkeley, Calif. *1934*
Corbett, James F., 76 79th St., Brooklyn, N.Y. *1932*
Corcoran, John J., Jr., Bur. of the Budget, State Dept. Bldg., Washington, D.C. *1936*
Cordell, H. W., Ohio State Univ., Col. of Com., Columbus, Ohio. *1921*
Cordero, Rafael de J., Universidad de Puerto Rico, Dept. of Econ., Rio Piedras, P.R. *1939*
Corey, C. Stanley, 305 Highland Ave., Kent, Ohio. *1935*
Corey, Hibbert D., Col. of William and Mary, Dept. of Econ., Williamsburg, Va. *1940*
Cornateanu, Nicolae, Institutul Agronomice, Bulevardul Marasti 61, Bucarest, Rumania. *1940*
Corry, Ormond C., T.V.A., Dept. of Power Planning, Knoxville, Tenn. *1928*
Corstvet, Emma, 410 Riverside Dr., New York, N.Y. *1934*
Cosson, Clarence, 602 Register and Tribune Bldg., Des Moines, Iowa. *1927*
Cotton, Thomas L., 60 E. 42nd St., New York, N.Y. *1939*
Couper, Walter J., 1 St. Andrew's Lane, Silver Spring, Md. *1923*
Court, Andrew T., 320 New Center Bldg., Detroit, Mich. *1940*
Cover, John H., U. S. Dept. of Com., Bur. of For. and Dom. Com., Washington, D.C. *1921*
Cover, Virgil D., Univ. of Arkansas, Col. of Bus. Admin., Fayetteville, Ark. *1932*

Cowan, Donald R. G., Swift and Co., Commercial Res. Dept., Chicago, Ill. *1925*
Cowden, Dudley J., 738 E. Franklin St., Chapel Hill, N.C. *1928*
Cowdrick, Edward S., Room 3115, 30 Rockefeller Plaza, New York, N.Y. *1926*
Cowin, Roy B., 1124 N. New St., Bethlehem, Pa. *1936*
Cowles, Alfred, 1130 Lake Shore Dr., Chicago, Ill. *1940*
Cox, Alonzo B., Univ. Sta., Austin, Tex. *1923*
Cox, Forrest D., 839 Lincoln Ave., Winnetka, Ill. *1934*
Cox, Garfield V., Univ. of Chicago, Faculty Exchange, Chicago, Ill. *1923*
Cox, George C., 70 Pine St., NewYork, N.Y. *1911*
Cox, Reavis, Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1934*
Cox, Robert A., 720 E. 32nd St., Austin, Tex. *1922*
Craf, John R., 610 W. 115th St., New York, N.Y. *1939*
Crafer, Thomas W. B., Syracuse Univ., Dept. of Econ., Syracuse, N.Y. *1935*
Cramer, Edison H., Univ. of Colorado, School of Bus., Boulder, Colo. *1940*
Crandall, Burton B., Box 42, Alfred, N.Y. *1932*
Crandall, Roy L., Crandall, Pierce and Co., Inc., 105 W. Adams St., Chicago, Ill. *1940*
Crane, John B., Northwestern Univ., 309 Harris Hall, Evanston, Ill. *1939*
Crawford, Arthur W., 6325 Woodside Pl., Chevy Chase, Md. *1935*
Crawford, Mary M., Indiana Univ., Bloomington, Ind. *1937*
Crawford, Robert P., Univ. of Nebraska, Lincoln, Neb. *1934*
Crennan, Charles H., Continental Illinois Co., 231 S. La Salle St., Chicago, Ill. *1920*
Creswell, Charles F., 165 Broadway, Room 910, New York, N.Y. *1923*
Criz, Maurice, 5478 University Ave., Chicago, Ill. *1939*
Crockett, Earl C., Univ. of Colorado, Boulder, Colo. *1939*
Crompton, George, 74 William St., Worcester, Mass. *1935*
Cronin, John A., St. Mary's Col., St. Mary's, Kans. *1938*
Cronin, John F., St. Mary's Seminary, 600 N. Paca St., Baltimore, Md. *1939*
Cronin, John W., 61 Shattuck Rd., Watertown, Mass. *1928*
Crook, Wilfred H., 382 Osceola Ave., Kingston, Pa. *1926*
Crosby, George R., 7 High Rock Way, Allston, Mass. *1925*
Cross, Hartley W., Springfield Col., Springfield, Mass. *1931*
Cross, Ira B., 1454 Le Roy Ave., Berkeley, Calif. *1910*
Cross, Ira B., Jr., 204 Morgan Hall, Soldiers Field, Boston, Mass. *1939*
Crowder, Edward T., Jr., Rutgers Univ., Econ. Dept., New Brunswick, N.J. *1934*
Crowder, Walter F., Bur. of For. and Dom. Com., Div. of Econ. Res., Washington, D.C. *1937*
Crowley, Joseph P., Erasmus Hall High School, 911 Flatbush Ave., Brooklyn, N.Y. *1938*
Croxton, Fred C., 3360 16th St., N.W., Washington, D.C. *1911*
Crum, William L., 325 Littauer Center, Cambridge, Mass. *1921*
Crumbaker, Calvin, Univ. of Oregon, Eugene, Ore. *1925*
Culbertson, William S., Colorado Bldg., Washington, D.C. *1936*
Cullen, James A., 52 S. 2nd Ave., Mt. Vernon, N.Y. *1934*
Cumberland, William W., 120 Broadway, New York, N.Y. *1916*
Cummings, Mark W., 1628 Telephone Bldg., 1010 Pine St., St. Louis, Mo. *1927*
Cunningham, William J., 28 Buckingham St., Cambridge, Mass. *1912*
Currie, Lauchlin B., Fed. Res. Bd., Washington, D.C. *1927*
Curtis, Clifford A., Queen's Univ., Dept. of Polit. and Econ. Sci., Kingston, Ont., Canada. *1924*
Curtis, George B., Lehigh Univ., Bethlehem, Pa. *1926*
Curtis, L. Simington, 4459 Enright Ave., St. Louis, Mo. *1938*
Curtis, Roy E., Univ. of Missouri, Columbia, Mo. *1920*
Curtis, William R., 1908 Park Dr., Raleigh, N.C. *1935*
Cusack, Lawrence A., Creighton Univ., Omaha, Neb. *1934*
Cushing, Morgan B., Bowdoin Col., Brunswick, Me. *1920*
Cusick, James, Parker Apts., Hanover, N.H. *1932*
Custard, Harry L., 618 26th St., S., Arlington, Va. *1926*
Custis, Vanderveer, Northwestern Univ., Evanston, Ill. *1904*
Cutler, Addison T., Fisk Univ., Nashville, Tenn. *1938*

Dade, Emil B., Univ. of Kansas, 116 W. Admin. Bldg., Lawrence, Kan. *1923*
Dadisman, A. J., West Virginia Univ., Col. of Arts and Sci., Morgantown, W.Va. *1917*
Daggett, Stuart, Univ. of California, Berkeley, Calif. *1906*
Dailey, Don M., 410 W. Sibley St., Howell, Mich. *1921*

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Daly, Frederick S., Apt. 503, 383 Harvard St., Cambridge, Mass. *1939*

Daly, Michael, Wayne Univ., Dept. of Econ., Detroit, Mich. *1940*

Dameron, Wilbur R., Box 486, Dover, Del. *1927*

Danhof, Clarence H., Lehigh Univ., Dept. of Econ., Bethlehem, Pa. *1936*

Dankert, Clyde E., Dartmouth Col., Dept. of Econ., Hanover, N.H. *1929*

Dannenberg, Frederick M., 100 E. 18th St., Brooklyn, N.Y. *1936*

Dassel, Virgil H., 850 Montrose Ave., Columbus, Ohio. *1930*

Dauer, Ernst A., F.D.I.C., Div. of Res. and Statis., Washington, D.C. *1937*

Daugherty, Carroll R., U. S. Dept. of Labor, Wage and Hour Div., 1737 L St., N.W., Washington, D.C. *1930*

Daugherty, Martin M., Univ. of Delaware, Newark, Del. *1937*

Daugherty, Wayne F., 6 Alcatraz Pl., Mill Valley, Calif. *1940*

Da Vault, James W., 232 Bay State Rd., Boston, Mass. *1935*

Davenport, Donald H., 3212 Klingle Rd., N.W., Washington, D.C. *1924*

David, Paul T., 1714 Connecticut Ave., Washington, D.C. *1930*

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Davies, George R., Univ. of Iowa, Col. of Com., Iowa City, Iowa. *1925*

Davies, Margaret Gay (Mrs. Godfrey), Scripps Col., Claremont, Calif. *1936*

Davis, Edward H., 61 Oakland Ave., Waterbury, Conn. *1902*

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Davis, Horace B., 309 Lake Ave., Newton Highlands, Mass. *1929*

Davis, Jean S., Wells Col., Aurora, N.Y. *1923*

Davis, Joseph S., 691 Mirada Ave., Stanford University, Calif. *1911*

Davis, Pearce, 24 Sacramento St., Cambridge, Mass. *1937*

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Davis, William C., 220 Maple St., Reno, Nev. *1939*

Davis, William Z., 21 S. Bentley Ave., Niles, Ohio. *1934*

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Davisson, Malcolm M., Univ. of California, 119 South Hall, Berkeley, Calif. *1940*

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Dayton, Scott, Columbia Univ., School of Bus., New York, N.Y. *1940*

Dean, Joel P., Univ. of Chicago, School of Bus., Chicago, Ill. *1935*

Dean, Prentice N., U. S. Tariff Com., Washington, D.C. *1924*

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De Bard, August A., Jr., Keuka Col., Keuka Park, N.Y. *1932*

De Castro-Barberena, Manuel, 205 E. 31st St., New York, N.Y. *1938*

de Chazeau, Melvin G., Dawson Row, University, Va. *1934*

Decker, Paul O., American Nat. Bank and Trust Co., 33 N. La Salle St., Chicago, Ill. *1933*

De Ford, Herman J., 332 S. La Salle St., Chicago, Ill. *1933*

Deibler, Frederick S., Northwestern Univ., Evanston, Ill. *1908*

Delaplane, Walter H., Box 4811, Duke Sta., Durham, N.C. *1938*

Dell, Burnham N., Box 205, Princeton, N.J. *1925*

Demmery, Joseph, Univ. of Washington, Col. of Bus. Admin., Seattle, Wash. *1924*

Demond, Helen F., 2700 Que St., N.W., Washington, D.C. *1940*

Dempsey, Bernard W., 300 Newbury St., Boston, Mass. *1932*

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Dernburg, Hans J., 337 N. Pearl St., Granville, Ohio. *1938*

Descartes, Sol L., Agric. Exper. Sta., Dept. of Agric. Econ., Rio Piedras, P.R. *1934*

de Schweinitz, Dorothea, N.L.R.B., 1114 Market St., St. Louis, Mo. *1928*

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Deupree, Robert G., Baylor Univ., Dept. of Econ., Waco, Tex. *1938*

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Dewey, Francis H., 311 Main St., Worcester, Mass. *1915*
Dewey, Frederick A., 39 Broadway, Room 1516, New York, N.Y. *1913*
Dewey, Ralph L., U. S. Dept. of Agric., Bur. of Agric. Econ., Div. of Transportation, Washington, D.C. *1926*
Dewhurst, J. Frederic, Twentieth Century Fund, 330 W. 42nd St., New York, N.Y. *1934*
Deyo, Donald E., 17 Bond St., Manchester, Conn. *1939*
Diamond, Herbert M., Lehigh Univ., Bethlehem, Pa. *1932*
Dice, Charles A., Ohio State Univ., Com. Bldg., Columbus, Ohio. *1919*
Dickens, Paul D., 1432 44th St., N.W., Washington, D.C. *1930*
Dickinson, Frank G., Univ. of Illinois, 411 Com. Bldg., Urbana, Ill. *1923*
Dickinson, Z. Clark, Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. *1920*
***Dieckmann,** Adolf, 2423 Harrison Ave., Cincinnati, Ohio. *1918*
Dietrich, Ethel B., Mount Holyoke Col., South Hadley, Mass. *1920*
Dingol, Solomon, 38 W. 74th St., New York, N.Y. *1936*
Dinic, Carl J., 7075 Flaccus Rd., Ben Avon, Pa. *1926*
Dinwiddie, George S., 317 Baronne St., New Orleans, La. *1940*
Ditmars, August, 89-47 115th St., Richmond Hill, L.I., N.Y. *1939*
Dittman,Albert, 1125E. 62nd St., Chicago, Ill. *1939*
Di Venuti, Biagio, Boston Univ., Boston, Mass. *1939*
Divine, Thomas F., Marquette Univ., Johnston Hall, Milwaukee, Wis. *1939*
Dix, Samuel M., 280 Broadway, New York, N.Y. *1910*
Dixon, Floyd J., Commercial High School, Regina, Sask., Canada. *1938*
Dixon, Frank H., Princeton, N.J. *1894*
Dixon, Russell A., Univ. of Pittsburgh, Pittsburgh, Pa. *1928*
Dizmang, Oscar K., N. 5411 Post St., Spokane, Wash. *1931*
Dockeray, James C., James Millikin Univ., Decatur, Ill. *1934*
Dodd, David L., Columbia Univ., 414 School of Bus., New York, N.Y. *1922*
Dodd, Paul A., Univ. of California, Dept. of Econ., Los Angeles, Calif. *1929*
Doering, Edward R., 1139 Arrott St., Frankford, Philadelphia, Pa. *1937*
Doherty, Richard P., Boston Univ., 525 Boylston St., Boston, Mass. *1937*
Dolbeare, Harwood B., Col. of Com., Gainesville, Fla. *1923*
Dolezel, Karel, Brezinova 33, Brno 16, Moravia. *1933*
Dolley, James C., Univ. of Texas, School of Bus. Admin., Austin, Tex. *1928*
Donald, William J. A., Nat. Electrical Manufacturers Asso., 115 E. 44th St., New York, N.Y. *1912*
Donaldson, David N., Colorado Agric. Col., Fort Collins, Colo. *1929*
Donaldson, Elvin F., Ohio State Univ., Com. Bldg., Columbus, Ohio. *1931*
Donaldson, John, George Washington Univ., Washington, D.C. *1925*
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Donham, Wallace B., Dean's House, Soldiers Field, Boston, Mass. *1909*
Donnan, Elizabeth, Wellesley Col., Wellesley, Mass. *1922*
Donnelley, Thomas E., 350 E. 22nd St., Chicago, Ill. *1934*
Donovan, Clement H., Univ. of North Carolina, Chapel Hill, N.C. *1933*
Dorau, Herbert B., 268 Mountain Ave., Ridgewood, N.J. *1934*
Dorfman, Joseph, Columbia Univ., Dept. of Econ., New York, N.Y. *1939*
Doriot, Georges F., Harvard Bus. School, Morgan Hall, Soldiers Field, Boston, Mass. *1926*
Dougall, Herbert E., Northwestern Univ., School of Com., Evanston, Ill. *1927*
Douglas, Dorothy W. (Mrs.), 47 Belmont Ave., Northampton, Mass. *1927*
Douglas, George A., 13 Bellaire Ct., Appleton, Wis. *1937*
Douglas, Paul H., Univ. of Chicago, Chicago, Ill. *1915*
Dowling, Edgar J., Diamond Alkali Co., 535 Smithfield St., Pittsburgh, Pa. *1938*
Downey, John O., General Motors Corp., 1775 Broadway, New York, N.Y. *1924*
Dowrie, George W., 421 El Escarpado, Stanford University, Calif. *1916*
Dozier, Howard D., Silver Spring, Md. *1918*
Drager, William, 130 E. 22nd St., New York, N.Y. *1932*
Draper, Ernest G., Board of Governors, Fed. Res. System, Washington, D.C. *1921*
Dreiman, Lawrence S., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1940*
Driver, John C., 2651 16th St., N.W., Washington, D.C. *1929*
Drucker, Adolf B., Univ. of North Carolina, Chapel Hill, N.C. *1939*

Drury, Horace B., 5025 Wisconsin Ave., Washington, D.C. *1915*
Drutzu, Serban T., Ebasco Services, Inc., 2 Rector St., New York, N.Y. *1928*
Dublin, Mary, 31 E. 12th St., New York, N.Y. *1938*
Du Brul, Stephen M., 13-143 General Motors Bldg., Detroit, Mich. *1933*
Duffus, William M., Ohio State Univ., Col. of Com. and Admin., Columbus, Ohio. *1917*
Duffy, James L., Holy Cross Col., Worcester, Mass. *1938*
Dulles, Eleanor L., 2824 Chain Bridge Rd., Washington, D.C. *1927*
Dummeier, Edwin F., Washington State Col., Pullman, Wash. *1922*
Duncan, Acheson J., 137 Jefferson Rd., Princeton, N.J. *1926*
Duncan, Carson S., 902 Transportation Bldg., Washington, D.C. *1915*
Duncan, Delbert J., Northwestern Univ., School of Com., Evanston, Ill. *1926*
Duncan, Julian S., Babson Inst., Babson Park, Mass. *1928*
Duncan, Kenneth, Pomona Col., Claremont, Calif. *1915*
Duncombe, Henry, 626 Aldine Ave., Chicago, Ill. *1938*
Dunford, C. S., 705 Sunset Lane, East Lansing, Mich. *1939*
Dunham, Robert J., 1500 Lake Shore Dr., Chicago, Ill. *1934*
Dunham, Scott H., 1416 Arch St., Berkeley, Calif. *1934*
Dunkman, William E., Univ. of Rochester, Morey Hall, Rochester, N.Y. *1926*
Durand, E. Dana, 3613 Norton Pl., N.W., Washington, D.C. *1898*
Durand, John D., Bur. of the Census, Div. of Population, Washington, D.C. *1939*
Durham, Walter A., Jr., Univ. of Denver, Dept. of Gov. Mgt., Denver, Colo. *1938*
Dutcher, Jessie R., 1404 Pacific St., Brooklyn, N.Y. *1923*
Dutton, Henry P., 2242 Pioneer Rd., Evanston, Ill. *1935*
Dye, Earl V., 332 Arbor Way, State College, Pa. *1920*
Dyer, Elizabeth, Univ. of Cincinnati, Cincinnati, Ohio. *1927*
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Eakin, Franzy, A. E. Staley Manufacturing Co., Decatur, Ill. *1936*
Earley, James S., Sterling Hall, Madison, Wis. *1935*
Eaves, Lucile, 41 Clark Rd., Brookline, Mass. *1911*
Eberhart, E. Kingman, 218 E. Bowman St., Wooster, Ohio. *1930*
Eberle, George J., 1314 7th St., Santa Monica, Calif. *1916*
Eberling, E. J., 3607 Bellwood Dr., Nashville, Tenn. *1939*
Ebersole, J. Franklin, 222 Morgan Hall, Soldiers Field, Boston, Mass. *1932*
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Eckard, Edwin W., Athens, W.Va. *1939*
Ecker-Rácz, L. László, 2333 S. Nash St., Arlington, Va. *1936*
Eckert, James B., 275 Park Ave., Rochester, N.Y. *1938*
Eckler, A. Ross, 3643 Brandywine St., N.W., Washington, D.C. *1929*
Eddy, Nelson H., 272 Lincoln Ave., Amherst, Mass. *1939*
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Edminster, Lynn R., 4409 Klingle St., N.W., Washington, D.C. *1923*
Edson, Andrew W., c/o U. S. Dept. of State, American Legation, Bucharest, Rumania, via pouch, Washington, D.C. *1939*
Edwards, Corwin D., 3200 Idaho Ave., N.W., Washington, D.C. *1925*
Edwards, George W., Box 453, Hartsdale, N.Y. *1922*
Edwards, Richard E., 50 N. Hood St., Peru, Ind. *1914*
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Egle, Walter P., Ohio State Univ., Dept. of Econ., Columbus, Ohio. *1935*
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Eldean, Fred A., 30 Rockefeller Plaza, New York, N.Y. *1938*
Elder, Robert F., 32 Peirce Rd., Wellesley Hills, Mass. *1930*
Eldridge, John G., Gainesville, Fla. *1927*
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Eliot, Clara, Barnard Col., New York, N.Y. *1922*
Ellerman, Frederick J., New York Univ., Univ. Heights, New York, N.Y. *1932*

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Elliott, George A., Univ. of Alberta, Edmonton, Alta., Canada. *1926*

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Ellis, Paul W., Apt. 301, 509 W. 121st St., New York, N.Y. *1937*

Ellis, Ray G., 250 E. Columbia St., Detroit, Mich. *1921*

Elliston, Herbert B., *Christian Science Monitor,* 1 Norway St., Boston, Mass. *1930*

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Elsasser, Robert W., Tulane Univ., Gibson Hall, New Orleans, La. *1925*

Elvove, Joseph T., 4106 4th St., N., Arlington, Va. *1937*

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Ely, Roy J. W., Montana State Univ., Missoula, Mont. *1928*

Emerich, Tom P., 329 S. 44th, Philadelphia, Pa. *1938*

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Falk, I. S., Soc. Sec. Bd., Bur. of Res. and Statis., Washington, D.C. *1940*

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Fenninger, Carl W., Provident Trust Co., 17th and Chestnut Sts., Philadelphia, Pa. *1925*
Fentress, Calvin, 208 S. La Salle St., Chicago, Ill. *1933*
Ferebee, Enoch E., Apt. 706, 6104 Woodlawn Ave., Chicago, Ill. *1929*
Ferger, Wirth F., 3110 17th St., N., Arlington, Va. *1935*
Ferguson, John M., Univ. of Pittsburgh, Pittsburgh, Pa. *1917*
Fernald, Roy L., Winterport, Me. *1932*
Ferrin, Dana H., D. Appleton-Century Co., 35 W. 32nd St., New York, N.Y. *1932*
Fetter, Frank A., 168 Prospect Ave., Princeton, N.J. *1894*
Fetter, Frank W., Haverford Col., Haverford, Pa. *1923*
Fetter, Theodore A., Box 11, Benjamin Franklin Sta., Washington, D.C. *1930*
Feuerlein, Willy J. A., 195 Whitney Ave., New Haven, Conn. *1940*
Ficek, Karel F., Stamford, N.Y. *1926*
Fichtner, Charles C., School of Bus. Admin., Fayetteville, Ark. *1924*
Fick, John W., 420 Tremont St., North Tonawanda, N.Y. *1940*
Field, Frederick V., 1929 E. 52nd St., New York, N.Y. *1934*
Field, Kenneth, Carnegie Inst. of Tech., Schenley Park, Pittsburgh, Pa. *1936*
Field, Marshall, 250 Park Ave., New York, N.Y. *1920*
Fields, Carl R., Georgetown Col., Georgetown, Ky. *1937*
Fife, Harry M., 12 College St., Middlebury, Vt. *1926*
Filene, Lincoln, 416 Washington St., Boston, Mass. *1909*
Filipetti, George, Univ. of Minnesota, School of Bus., Minneapolis, Minn. *1922*
Filley, H. Clyde, Col. of Agric., Lincoln, Neb. *1923*
Finck, David H., 15 Washington St., Newark, N.J. *1939*
Fine, Sherwood M., 14 Wendell St., Cambridge, Mass. *1939*
Fink, Cornelius W., Dickinson Col., Carlisle, Pa. *1923*
Finnegan, Joseph H., 3350 Bronx Blvd., New York, N.Y. *1937*
Finney, Harry A., 208 S. La Salle St., Chicago, Ill. *1937*
Finney, Thomas W., Tulsa Chamber of Com., Tulsa, Okla. *1940*
Fireoved, Elgie L., Western Union Col., Le Mars, Iowa. *1926*
Fischer, Edwin R., 1948 Bathgate Ave., New York, N.Y. *1940*
Fischer, Harold, Franklin and Marshall Col., Lancaster, Pa. *1932*
Fischer, Monroe C., Louisiana State Univ., Col. of Com., University, La. *1939*
Fishburn, J. P., Box 1139, Roanoke, Va. *1923*
Fishburn, John T., 9207 Connecticut Ave., Chevy Chase, Md. *1939*
Fisher, Allan G. B., Royal Inst. of Int. Affairs, Chatham House, St. James's Sq., London, S.W.1, England. *1926*
Fisher, Allan J., Univ. of Maryland, Col. of Com., College Park, Md. *1937*
Fisher, Clyde O., Wesleyan Univ., Middletown, Conn. *1916*
Fisher, Ernest M., American Bankers Asso., Washington Bldg., Washington, D.C. *1923*
***Fisher,** Irving, 460 Prospect St., New Haven, Conn. *1894*
Fisher, J. L., Allegheny Col., Meadville, Pa. *1940*
Fisher, Waldo E., Univ. of Pennsylvania, Wharton School, 310 Logan Hall, Philadelphia, Pa. *1926*
Fitch, John A., 122 E. 22nd St., New York, N.Y. *1910*
Fitch, Lyle C., 1192 E. 31st St., Brooklyn, N.Y. *1939*
Fitzgerald, J. Anderson, Univ. of Texas, Austin, Tex. *1914*
Fitzgerald, Lloyd E., Univ. of Detroit, Col. of Com. and Fin., Detroit, Mich. *1935*
FitzPatrick, Paul J., Catholic Univ. of America, Washington, D.C. *1939*
Flanders, Dwight P., Syracuse Univ., Room 106 Maxwell, Syracuse, N.Y. *1937*
Flanders, Ralph E., Box 476, Springfield, Vt. *1932*
Flatley, L. Thomas, Mundelein Col., Chicago, Ill. *1932*
Fleisher, Alexander, P.O. Box 5, Churchville, Pa. *1911*
Fleming, Ralph D., 795 Lancaster St., Albany, N.Y. *1911*
Fletcher, Henry, Field Point Park, Greenwich, Conn. *1919*
Flinn, Bernard W., 1636 Charles St., Rockford, Ill. *1932*
Flinn, Lawrence, Room 4408, 405 Lexington Ave., New York, N.Y. *1939*
Flocken, Ira G., 1226 Lancaster Ave., Pittsburgh, Pa. *1909*
Florinsky, Michael T., Columbia Univ., Fayerweather Hall, New York, N.Y. *1934*
Flowers, John B., 121 Chestnut St., Brooklawn, Gloucester City, N.J. *1935*

Flubacher, Joseph F., 424 Ashdale St., Philadelphia, Pa. *1938*

Flynn, John T., 15 E. 40th St., New York, N.Y. *1938*

Foerster, Robert F., 75 Olden Lane, Princeton, N.J. *1909*

Foery, Raymond W., 6 E. Mercer Ave., Llanerch, Del. Co., Pa. *1927*

‡**Földes,** Bèla, IV Duna utca I, Budapest, Hungary. *1927*

Foley, Ernest B., Boston Col., Chestnut Hill, Mass. *1938*

Folsom, Marion B., 343 State St., Rochester, N.Y. *1924*

Folts, Franklin E., Harvard Univ., Grad. School of Bus. Admin., Morgan Hall, Soldiers Field, Boston, Mass. *1929*

Foote, Edmund W., 93 Lincoln St., Montclair, N.J. *1928*

Ford, Caroll W., Univ. of Akron, Akron, Ohio. *1937*

Ford, Robert S., Univ. of Michigan, Bur. of Gov., Ann Arbor, Mich. *1929*

Fordham, Herbert, Trinity Bldg., 111 Broadway, New York, N.Y. *1910*

Foreman, Clarence J., 260 Ludlow Ave., Cincinnati, Ohio. *1918*

Forkosch, Morris D., 369 Lexington Ave., New York, N.Y. *1939*

Foss, Feodore F., Emerson Rd., Woodsdale, Wheeling, W.Va. *1918*

Foster, J. R., 118 Ashwood Ave., Summit, N.J. *1935*

Foster, Louis O., Western Reserve Univ., Cleveland, Ohio. *1938*

Foster, Major B., New York Univ., School of Com., Washington Sq., New York, N.Y. *1939*

Foster, Philip F., 338 W. College Ave., State College, Pa. *1934*

Foth, Joseph H., 1703 E. 50th Ter., Kansas City, Mo. *1925*

Fournier, Leslie T., 3107 Hawthorne St., N.W., Washington, D.C. *1935*

Fowler, Edwin J., 72 W. Adams St., Chicago, Ill. *1925*

Fox, Abraham M., U. S. Tariff Com., Washington, D.C. *1923*

Fox, Bertrand, 11 Park St., Williamstown, Mass. *1934*

Fox, Feramorz Y., Latter-Day Saints Bus. Col., Salt Lake City, Utah. *1919*

Fox, Martin J., 1841 Columbia Rd., N.W., Washington, D.C. *1924*

Fox, Mortimer J., Jr., Tri-Continental Corp., 54 Wall St., New York, N.Y. *1938*

Frain, H. La Rue, Univ. of Pennsylvania, Wharton School, Econ. Dept., Philadelphia, Pa. *1923*

Fraine, Harold G., 3555 Netherlands Ave., New York, N.Y. *1929*

Frame, Samuel J., Commonwealth Bldg., 21 King St., E., Toronto 2, Ont., Canada. *1918*

Frame, William A., Box 202, Fruitland Park, Fla. *1915*

Francis, Brother Clement, Manhattan Col., New York, N.Y. *1934*

Franklin, Harry L., 2700 Que St., N.W., Washington, D.C. *1938*

Fraser, Herbert F., Swarthmore Col., Swarthmore, Pa. *1926*

Frazer, George E., 39th Fl., Board of Trade Bldg., Chicago, Ill. *1935*

Freedman, Arthur M., Univ. of Cincinnati, Memorial Dormitory, Cincinnati, Ohio. *1940*

Freeman, Clytus A., 3616 39th, Brentwood, Md. *1914*

Freeman, Edwin S., 12 Benton St., Wellesley, Mass. *1924*

§**Freeman,** Herbert C., 960 N. Broadway, Yonkers, N.Y. *1917*

Freeman, Ralph S., Massachusetts Inst. of Tech., Cambridge, Mass. *1930*

French, Delbert R., Univ. of Oregon, Dept. of Econ., Eugene, Ore. *1929*

French, Isabel M., 416 W. 118th St., Apt. 43, New York, N.Y. *1940*

French, Robert W., Sparta, Mich. *1934*

Frew, Walter E., Corn Exchange Bank, William and Beaver Sts., New York, N.Y. *1913*

Frey, Harold A., Univ. of Toledo, Toledo, Ohio. *1928*

Frickey, Edwin, Harvard Univ., Dept. of Econ., Cambridge, Mass. *1924*

Friday, David, 4525 Garfield St., Washington, D.C. *1910*

Friedberg, Morris, Simmons Col., Dept. of Econ., Boston, Mass. *1936*

Friedman, Elisha M., 15 Broad St., New York, N.Y. *1918*

Friedman, Harry G., 345 W. 88th St., Apt. 9-C, New York, N.Y. *1908*

Friedrich, William G., 18 Arcularius Ter., Maplewood, N.J. *1940*

Frisbee, Ira N., 239 S. Peck Dr., Beverly Hills, Calif. *1925*

Fritz, Wilbert G., Univ. of Pittsburgh, Bur. of Bus. Res., Pittsburgh, Pa. *1930*

Fritzemeier, Louis H., 1142 S. Maple Ave., Oak Park, Ill. *1937*

Froehlich, Walter, St. Mary's Col., Winona, Minn. *1938*

Froehlich, Willard H., 1719 Upshur St., N.W., Washington, D.C. *1938*

Froman, Lewis A., Univ. of Buffalo, Dept. of Econ., Buffalo, N.Y. *1930*

Fryxell, Carl A., Augustana Col., Rock Island, Ill. *1937*

Fujimoto, Kotaro, Tokyo Univ. of Commerce, Tokyo, Japan. *1916*

Fuller, Bert C., 2 Singer Ave., Spring Valley, Rockland Co., N.Y. *1916*
Fuller, Denton A., Jr., Manufacturers and Traders Trust Co., Buffalo, N.Y. *1940*
Fuller, Kemp G., 436 7th Ave., Pittsburgh, Pa. *1938*
***Fuller,** Paul, 2 Rector St., New York, N.Y. *1887*
Fulmer, John L., Box 1518, Univ. Sta., Charlottesville, Va. *1940*
Funkhouser, Richard L., Amos Tuck School of Admin. and Fin., Dartmouth Col., Hanover, N.H. *1936*
Furniss, Edgar S., Grad. School, Yale Sta., New Haven, Conn. *1915*

Gabbert, Mont R., Univ. of Pittsburgh, Pittsburgh, Pa. *1933*
Gaffey, John D., Rensselaer Poly. Inst., Troy, N.Y. *1940*
Gagliardo, Domenico, Univ. of Kansas, Dept. of Econ., Lawrence, Kan. *1925*
Galbraith, John K., Princeton Univ., Dept. of Econ., Princeton, N.J. *1939*
Galbreath, C. Edward, Box 191, Alfred, N.Y. *1934*
Gale, Hoyt R., 1775 Hill Dr., Eagle Rock, Los Angeles, Calif. *1938*
Galenson, Walter, 315 Riverside Dr., New York, N.Y. *1938*
§**Gallaher,** Ernest Y., Western Union Tel. Co., 60 Hudson St., New York, N.Y. *1916*
Galloway, Lee, Lake Wales, Fla. *1909*
Galloway, Leon J., 15 Twin Lawns Ave., Hicksville, N.Y. *1934*
Galpin, Henry L., 145 Everit St., New Haven, Conn. *1911*
Gamber, Merle P., Studebaker Corp., Div. of Sales Training, South Bend, Ind. *1939*
Gambs, John S., 21 Route de Florissant, Geneva, Switzerland. *1939*
Gamm, Sara, 1611 31st St., N.W., Washington, D.C. *1937*
Gane, Frank H., Northwestern Univ., School of Com., Evanston, Ill. *1934*
Gann, William D., 82-88 Wall St., New York, N.Y. *1925*
Gardner, Kelsey B., 7527 17th St., N.W., Washington, D.C. *1924*
Gardner, Walter R., 115 Leland St., Chevy Chase, Md. *1940*
Garis, Roy L., Vanderbilt Univ., Nashville, Tenn. *1937*
Garlock, Fred L., Bur. of Agric. Econ., Washington, D.C. *1930*
Garman, Cameron G., Farm Credit Admin., 1300 E St., N.W., Washington, D.C. *1931*
Garman, Phillips L., Int. Printing Pressmen and Assistants' Union of North America, Pressmen's Home, Tenn. *1937*
Garnsey, Morris E., Univ. of Colorado, Dept. of Econ., Boulder, Colo. *1930*
Garrett, Seymour S., 115 Oak Hill Rd., Ithaca, N.Y. *1921*
Garver, Earl S., 276 Dwight St., New Haven, Conn. *1940*
Garver, Frederic B., Univ. of Minnesota, School of Bus., Minneapolis, Minn. *1911*
Gates, William B., Jr., c/o Mrs. Morehouse, 213 Perrin Ave., Lafayette, Ind. *1939*
Gaum, Carl G., Rutgers Univ., Univ. Ext. Div., New Brunswick, N.J. *1934*
Gay, Edwin F., Henry Huntington Library, San Marino, Calif. *1904*
Gay, Merrill C., Univ. of Maryland, Dept. of Econ., College Park, Md. *1940*
Gayer, Arthur D., Columbia Univ., New York, N.Y. *1938*
Gee, Wilson, Univ. of Virginia, School of Rural Econ., Charlottesville, Va. *1923*
Geeting, Roy E., Alfred Holbrook Col., Manchester, Ohio. *1937*
Gemmill, Paul F., Univ. of Pennsylvania, 28 Logan Hall, Philadelphia, Pa. *1925*
George, W. D., People's Savings Bank Bldg., Pittsburgh, Pa. *1912*
Gerstenberg, Charles W., Prentice-Hall, Inc., 70 5th Ave., New York, N.Y. *1910*
Gettell, Richard G., 32 High St., New Haven, Conn. *1938*
Gibbs, George, Jr., Univ. of California, Bur. of Public Admin., Berkeley, Cal. *1936*
Gibson, Ernest W., Harding Col., Searcy, Ark. *1940*
Gideonse, Harry D., 106 Willow St., Brooklyn, N.Y. *1925*
Gideonse, Max, Rutgers Univ., Dept. of Econ., New Brunswick, N.J. *1930*
Giffin, Roscoe R., Jr., 1211 W. Main, Urbana, Ill. *1939*
Gifford, Walter S., 195 Broadway, New York, N.Y. *1909*
Gilbert, Donald W., Univ. of Rochester, Dept. of Econ., Rochester, N.Y. *1934*
Gilbert, Horace N., California Inst. of Tech., Dabeney Hall, Pasadená, Calif. *1928*
Gilbert, Milton, Bur. of For. and Dom. Com., Washington, D.C. *1939*
Gilboy, Elizabeth W., 40 Holyoke House, Cambridge, Mass. *1937*
Gile, Bueford M., Univ. of Louisiana, Dept. of Agric. Econ., University, La. *1925*
Gill, Corrington C., 2630 Adams Mill Rd., Washington, D.C. *1928*
Gill, John D., Atlantic Refining Co., 260 S. Broad St., Philadelphia, Pa. *1930*
Gillespie, Jesse R., 815 Bonita Dr., South Pasadena, Calif. *1928*
Gillett, Roy L., R.R. 1, Delmar, N.Y. *1920*

Gillim, Marion H., Box 626, Owensboro, Ky. *1940*

Gilmore, Eugene A., Jr., Univ. of Nebraska, Lincoln, Neb. *1929*

Gilson, Mary B., Univ. of Chicago, Dept. of Econ., Chicago, Ill. *1931*

Ginsberg, Sarah, 1844 Columbia Rd., Washington, D.C. *1938*

Ginzberg, Eli, 435 W. 119th St., New York, N.Y. *1931*

Ginzburg, Benjamin, 5209 Chevy Chase Pkwy., Washington, D.C. *1938*

Girard, Richard A., New York Univ., Washington Square Col., Dept. of Econ., New York, N.Y. *1930*

Gitelson, M. Leo, 340 Riverside Dr., New York, N.Y. *1924*

Givens, Meredith B., Dept. of Labor, Div. of Place. and Unemp. Ins., 342 Madison Ave., New York, N.Y. *1923*

Glaeser, Martin G., Univ. of Wisconsin, 314 Sterling Hall, Madison, Wis. *1920*

Glaser, Ezra, 2212 Eye St., N.W., Washington, D.C. *1938*

Glassman, Alfred R., 1834 Caton Ave., Brooklyn, N.Y. *1937*

Glasson, William H., 710 Buchanan Rd., Durham, N.C. *1940*

Glaves, Cecil R., Lewis Inst., 1951 W. Madison St., Chicago, Ill. *1937*

Glenn, John M., 1 Lexington Ave., New York, N.Y. *1894*

Glocker,. Theodore W., Univ. of Tennessee, School of Com., Knoxville, Tenn. *1937*

Glover, Charles A., 515 Upper Mountain Ave., Upper Montclair, N.J. *1925*

Glover, John D., Harvard Univ., Little Hall 11, Cambridge, Mass. *1940*

Gluck, Harold, Walton High School, 195th St. and Jerome Ave., Bronx, New York, N.Y. *1935*

Goeltz, J. Donald, Univ. of Tennessee, 402 Ayres Hall, Knoxville, Tenn. *1937*

Goetz, Billy E., 1756 Cedar Rd., Homewood, Ill. *1936*

Goetz, Jacob H., 783 E. 17th St., Brooklyn,N.Y. *1914*

Gold, Bela, 3901 N. 4th St., Arlington, Va. *1938*

Goldenberg, Leon, 6850 Cornell Ave., Chicago, Ill. *1936*

Goldenweiser, Emanuel A., 5914 Cedar Pkwy., Chevy Chase, Md. *1911*

Goldhammer, Bernard, 1937 S.E. 42nd Ave., Portland, Ore. *1940*

Goldwasser, Betti C., 2212 Eye St., N.W., Washington, D.C. *1938*

Gonzalez, Richard J., Humble Oil and Refining Co., 1365 Humble Bldg., Houston, Tex. *1935*

Goodbar, Joseph E., Society for Stability in Money and Banking, Inc., 36 W. 44th St., New York, N.Y. *1937*

Gooden, Orville T., Hendrix Col., Conway, Ark. *1920*

Goodhue, Everett W., Dartmouth Col., Hanover, N.H. *1905*

Goodman, Gilbert, 2412 Leslie, Detroit, Mich. *1940*

Goodrich, Carter, Columbia Univ., New York, N.Y. *1921*

Goodwin, Eneas B., Loyola Univ., Dept. of Econ., Chicago, Ill. *1932*

Gordman, Howard S., 891 Warren St., Albany, N.Y. *1935*

Gordon, Leland J., Denison Univ., Granville, Ohio. *1939*

***Gordon,** Louis D., 540 W. Williams Ave., Fallon, Nev. *1916*

Gordon, Robert A., Univ. of California, Dept. of Econ. Berkeley, Calif. *1936*

Gorski, Roman von S., 500 Riverside Dr., New York, N.Y. *1932*

Gottsegen, Jack J., 285 Henry St., Brooklyn, N.Y. *1934*

Goudriaan, Jan, Bachlaan 18, Hilversum, Netherlands. *1935*

Gould, Elenor R., U. S. Dept. of Com., Bur. of For. and Dom. Com., Fin. Div., Washington, D.C. *1938*

Gould, Joseph S., Univ. of Delaware, Newark, Del. *1930*

Gourrich, Paul P., 10 Glen Rd., West Orange, N.J. *1940*

Gourvitch, Alexander, 1863 Loring Pl., New York, N.Y. *1926*

Gow, J. Steele, Maurice and Laura Falk Found., Farmers Bank Bldg., Pittsburgh, Pa. *1935*

Grady, Eleanor H. (Mrs.), Hunter Col., Park Ave. and 68th St., New York, N.Y. *1921*

Grady, Henry F., Asst. Secy., U. S. Dept. of State, Washington, D.C. *1927*

Gragg, Charles I., Harvard Univ., Bus. School, Soldiers Field, Boston, Mass. *1928*

Graham, Benjamin, 80 Broad St., New York, N.Y. *1934*

Graham, Frank D., 214 Western Way, Princeton, N.J. *1921*

Graham, T. Bertrand, Metropolitan Life Ins. Co., New York, N.Y. *1917*

Gras, Norman S. B., Harvard Univ., School of Bus., Soldiers Field, Boston, Mass. *1918*

Graue, Erwin, Univ. of Idaho, Moscow, Idaho. *1930*

Gray, Edith S., U. S. Children's Bur., Washington, D.C. *1912*

Gray, Edward, 120 Harrison St., East Orange, N.J. *1910*

Gray, Edward R., U. S. Dept. of Com., Bur. of the Census; Div. of States and Cities, Washington, D.C. *1925*

Gray, Horace M., Univ. of Illinois, Dept. of Econ., Col. of Com., Urbana, Ill. *1923*

Gray, John H., 1323 Jackson St., Washington, D.C. *1888*

Gray, Lewis C., 3018 South Bldg., Washington, D.C. *1911*

Graziani, A., Arco Mirelli, III Izolato, Naples, Italy. *1927*

Greef, Albert O., Univ. of Newark, School of Bus. Admin., Newark, N.J. *1924*

Green, Paul M., Univ. of Illinois, 117 Com. Bldg., Urbana, Ill. *1928*

Greene, Catharine D. (Mrs. A. E.), Arizona State Teachers Col., Com. Dept., Tempe, Ariz. *1928*

Greffenius, Rino A., 3234 C St., Lincoln, Neb. *1939*

Gregory, Paul M., Clark Univ. Faculty House, 166 Woodland St., Worcester, Mass. *1940*

Gregory, William L., 312 E. Big Bend Rd., Webster Groves, Mo. *1934*

Grenier, Emile P., Col. of Com., University, La. *1939*

Gresham, Harold D., U. S. Tariff Com., 7th and E Sts., Washington, D.C. *1932*

Grether, Ewald T., Univ. of California, Econ. Dept., Berkeley, Calif. *1923*

Griffenhagen, Edwin O., 56 E. Elm St., Chicago, Ill. *1912*

Griffin, Albert, Emory University, Ga. *1934*

Griffin, Arthur G., Univ. of North Carolina, Chapel Hill, N.C. *1927*

Griffin, Clare E., 21 Ridge Way, Ann Arbor, Mich. *1920*

Griffin, John I., 723 E. 27th St., Brooklyn, N.Y. *1936*

Grimes, Waldo E., Kansas State Agric. Col., Manhattan, Kan. *1919*

Griswold, John A., Univ. of Oklahoma, Col. of Bus. Admin., Norman, Okla. *1931*

Groat, George G., Univ. of Vermont, Burlington, Vt. *1903*

Groves, Harold M., Univ. of Wisconsin, Dept. of Econ., Madison, Wis. *1926*

Gruchy, Allan G., Univ. of Maryland, Dept. of Econ., College Park, Md. *1937*

Gruener, Jennette R., 65 Mt. Vernon St., Boston, Mass. *1932*

Gruning, Charles H., P.O. Box 62, Mystic, Conn. *1927*

Guest, Harold W., Baker Univ., Baldwin, Kan. *1922*

Guggenheimer, Aimée, 27 E. 37th St., New York, N.Y. *1938*

Guild, Lawrence R., 1693 New Haven Ave., Dormont, Pittsburgh, Pa. *1926*

Gulick, Charles A., Univ. of California, 119 South Hall, Berkeley, Calif. *1923*

Gumbart, Edward H., Univ. of Connecticut, P.O. Box 312, Storrs, Conn. *1924*

Gumperz, Julian, Int. Inst. of Soc. Res., 429 W. 117th St., New York, N.Y. *1934*

Gunnarson, Arthur B., U. S. Chamber of Com., Domestic Distribution Dept., Washington, D.C. *1925*

Gunselman, Myrtle A., Kansas State Col., Dept. of Household Econ., Manhattan, Kan. *1934*

Guthmann, Harry G., Northwestern Univ., Com. Bldg., Evanston, Ill. *1919*

Gutmann, Franz, Univ. of North Carolina, Chapel Hill, N.C. *1939*

Guyton, Percy L., Simpson Col., Indianola, Iowa. *1939*

Haas, Francis J., Catholic Univ. of America, School of Soc. Sci., Washington, D.C. *1940*

Haas, George C., Treasury Dept., Washington, D.C. *1936*

Haber, William, Overidge Dr., Ann Arbor, Mich. *1936*

Haberler, Gottfried, Harvard Univ., Dept. of Econ., Cambridge, Mass. *1928*

Hacker, Louis M., Columbia Univ., New York, N.Y. *1934*

Hadley, Clausin D., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1936*

Haensel, Paul, 724 Simpson St., Evanston, Ill. *1931*

Hagedorn, George G., Lehman Corp., 1 S. William St., New York, N.Y. *1940*

Hagen, Everett E., Michigan State Col., Dept. of Econ., East Lansing, Mich. *1938*

Hahne, Ernest H., 731 Monticello St., Evanston, Ill. *1912*

Haig, Robert M., Columbia Univ., School of Bus., New York, N.Y. *1911*

Haines, Charles E., 414 W. 13th St., Pueblo, Colo. *1937*

Haines, George H., 139 State St., Grove City, Pa. *1938*

Halaas, Eugene T., Univ. of Denver, School of Com., Denver, Colo. *1935*

Hald, Earl C., Chico State Col., Dept. of Soc. Studies, Chico, Calif. *1939*

Hale, E. Everett, Univ. of Texas, Austin, Tex. *1927*

Hale, Robert L., Columbia Univ., New York, N.Y. *1911*

Hales, Charles A., 1401 Glenmere Rd., Greeley, Colo. *1936*

Haley, Bernard F., 638 Salvatierra, Stanford University, Calif. *1926*

Hall, Challis A., Jr., Harvard Univ., 12 Little Hall, Cambridge, Mass. *1938*

Hall, Frederick G., 43 Marlborough Park, Central, Lisburn Rd., Belfast, Northern Ireland. *1930*
Hall, James K., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1930*
Hall, W. Scott, 169½ N. Ashland Ave., Lexington, Ky. *1929*
Hall, Willard S., 819 Leland Ave., Chicago, Ill. *1929*
Halle, Hiram J., 50 W. 50th St., Rm. 5222, New York, N.Y. *1934*
Halley, Donald M., Tulane Univ., New Orleans, La. *1925*
Halm, George N., Tufts Col., Medford, Mass. *1937*
Halsey, Olga S., 912 19th St., N.W., Washington, D.C. *1914*
Ham, William T., 3618 Ordway St., N.W., Washington, D.C. *1925*
Hamilton, Earl J., Box 4811, Duke Sta., Durham, N.C. *1929*
Hamilton, Edward P., 440 4th Ave., New York, N.Y. *1924*
Hamilton, Frank A., Jr., 4745 Bayard St., Pittsburgh, Pa. *1939*
Hamilton, James M., Bozeman, Mont. *1920*
Hamilton, Roger S., Northeastern Univ., Boston, Mass. *1935*
Hamilton, Thomas R., Agric. Bldg., College Sta., Tex. *1923*
Hamilton, Walton H., Yale Law School, New Haven, Conn. *1916*
Hamm, John E., Russell Sage Found., 130 E. 22nd St., New York, N.Y. *1936*
Hammond, Seth, 9 W. 65th St., Apt. 5C, New York, N.Y. *1938*
Hanchett, David S., Fieldston School, Fieldston Rd., New York, N.Y. *1933*
Hancock, Glover D., Washington and Lee Univ., Lexington, Va. *1908*
Hand, George H., 185 N. Washington St., Delaware, Ohio. *1934*
Handsaker, Morrison, Occidental Col.. Los Angeles, Calif. *1938*
Handy, Walter K., Jr., 6148 Woodlawn Ave., Chicago, Ill. *1939*
Haney, Lewis H., 90 Trinity Pl., New York, N.Y. *1906*
Haney, Paul E., 1000 Chandler Bldg., Washington, D.C. *1940*
Hannay, Evan B., 23 Bank St., Princeton, N.J. *1940*
Hansen, Alvin H., Harvard Univ., Grad. School of Pub. Admin., Cambridge, Mass. *1919*
Hansen, Arthur S., 135 S. La Salle St., Chicago, Ill. *1935*
Hanson, Alice C., 4406 38th St., N., Arlington, Va. *1925*
Hanson, Arthur W., Morgan Hall 219, Soldiers Field, Boston, Mass. *1924*
Hanson, Simon G., Gwenwood Apts. 710, 1020 19th St., N.W., Washington, D.C. *1939*
Harbeson, Robert W., Rutgers Univ., Dept. of Econ., New Brunswick, N.J. *1927*
Harbison, Frederick H., Pine Rd., Sewickley, Pa. *1939*
Hardy, Charles O., 722 Jackson Pl., Washington, D.C. *1919*
Hardy, Edward R., 80 John St., New York, N.Y. *1911*
Hargrave, F. F., Fowler Hotel, Lafayette, Ind. *1931*
Haring, H. Albert, Jr., Indiana Univ., School of Bus., Bloomington, Ind. *1928*
Harlan, Charles L., U. S. Dept. of Agric., Div. of Crop and Live Stock Estimates, Washington, D.C. *1920*
Harr, Luther A., 317 N. Broad St., Philadelphia, Pa. *1932*
***Harriman,** Edward A., 1302 18th St., Washington, D.C. *1914*
Harriman, John W., Amos Tuck School, Hanover, N.H. *1925*
Harris, Abram L., Howard Univ., Washington, D.C. *1934*
Harris, H. B., Leesburg, Va. *1937*
Harris, Marshall D., 4641 24th St., N., Arlington, Va. *1936*
Harris, Seymour E., L-11 Dunster House, Cambridge, Mass. *1926*
Harris, W. Carlton, Logan Hall, 36th and Woodland Ave., Philadelphia, Pa. *1925*
§**Harrison,** Shelby M., 130 E. 22nd St., New York, N.Y. *1933*
Harriss, C. Lowell, 516 W. 122nd St., New York, N.Y. *1937*
Hart, Albert G., Iowa State Col., Dept. of Econ. and Soc., Ames, Iowa. *1936*
Hart, Alexander L., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1939*
Hart, Hornell, Hartford Seminary Found., Hartford, Conn. *1934*
Hart, Lawrence, 2335 Valentine Ave., New York, N.Y. *1940*
Hart, Maurice I., 40 Kensington Ter., Maplewood, N.J. *1939*
Hart, Orson H., 500 New Britain Ave., Hartford, Conn. *1937*
Hart, W. Lee, Station Hospital, Fort Sam Houston, Tex. *1928*
Harvill, Richard A., Univ. of Arizona, Dept. of Econ., Tucson, Ariz. *1933*
Hasbrouck, Henry C., 61 Broadway, New York, N.Y. *1911*
Hasek, Carl W., 502 E. Foster Ave., State College, Pa. *1922*
Hasse, Adelaide R., 806 Islington St., Silver Spring, Md. *1914*

Hastings, Hudson B., 6 Everit St., New Haven, Conn. *1920*
Hatch, Leonard W., 425 Pelham Manor Rd., Pelham Manor, N.Y. *1901*
Hatfield, George W., "Heathfield," New Canaan, Conn. *1937*
***Hathaway,** Frank R., 142 Green St., Hudson, N.Y. *1888*
Hatchcock, James S., U. S. Civil Serv. Com., Washington, D.C. *1940*
Hauhart, William F., S. M. Univ., Dallas, Tex. *1920*
Havens, R. Murray, 1809 Chapel Hill Rd., Durham, N.C. *1938*
Hawes, Harry B., 711 Transportation Bldg., Washington, D.C. *1934*
Hawkins, Edward R., Pennsylvania State Col., Dept. of Econ., State Col., Pa. *1939*
Hawkins, Everett D., California Inst. of Tech., Dabney Hall, Pasadena, Calif. *1930*
Hawkinson, James R., Northwestern Univ., School of Com., Evanston, Ill. *1927*
Haworth, Clifford L., 591 Poplar Ave., Elmhurst, Ill. *1929*
Hayes, H. Gordon, Ohio State Univ., Col. of Com., Columbus, Ohio. *1915*
Hayes, Marion, 7½ Jane St., New York, N.Y. *1939*
Hayes, Samuel P., Jr., 1344 Midland Ave., Bronxville, N.Y. *1938*
Hayford, F. Leslie, General Motors Corp., 1775 Broadway, New York, N.Y. *1919*
Hayman, Henry H., 8030 St. Martins Lane, Philadelphia, Pa. *1934*
Haynes, Williams, Stonecrop Farm, North Stonington, Conn. *1924*
Healy, James J., Grad. School of Bus. Admin., Baker 211, Soldiers Field, Boston, Mass. *1938*
Healy, Kent T., Yale Univ., New Haven, Conn. *1932*
Heatherington, Donald F., Richmond, Vt. *1938*
Heaton, Herbert, Univ. of Minnesota, Minneapolis, Minn. *1926*
Heck, Chester R., American Book Co., 88 Lexington Ave., New York, N.Y. *1928*
Heck, Victor C., 1 East Ave., Ithaca, N.Y. *1938*
Heckman, Harry W., 108 Thompson Ave., New Concord, Ohio. *1940*
‡**Heckscher,** Eli F., Baldersgatan 10 A, Stockholm ö, Sweden. *1938*
Hedges, Joseph E., Emory University, Ga. *1932*
Heer, Clarence, Fed. Security Agency, Washington, D.C. *1934*
Heflebower, Richard B., State Col. of Washington, Pullman, Wash. *1934*
Heilperin, Michael A., c/o Rockefeller Found., 49 W. 49th St., New York, N.Y. *1934*
Heimann, Eugene A., 1506 S. 10th St., Waco, Tex. *1934*
Heiss, Charles A., 195 Broadway, New York, N.Y. *1913*
Helbing, Albert T., Div. of Unemp. Comp., 222 W. North Bank Dr., Chicago, Ill. *1930*
Held, Felix E., Ohio State Univ., Col. of Com. and Journ., Columbus, Ohio. *1922*
Hellborn, Ludwig S., S.E.C., Res. and Statis. Sec., Washington, D.C. *1939*
Hellebrandt, Edwin T., Ohio Univ., Athens, Ohio. *1929*
Helm, Florence, 1725 New Hampshire Ave., N.W., Washington, D.C. *1930*
Helmreich, Theodore C., 4307 McPherson, St. Louis, Mo. *1936*
Helms, Lloyd A., Bowling Green State Univ., Bowling Green, Ohio. *1927*
Hemmeon, Joseph C., McGill Univ., Montreal, Que., Canada. *1909*
Hench, William M., Univ. of Pennsylvania, 209 Bennett Hall, Philadelphia, Pa. *1932*
Henderson, Leon, 2121 Bancroft Pl., N.W., Washington, D.C. *1935*
Henderson, Lucien G., Ronald Press Co., 15 E. 26th St., New York, N.Y. *1919*
Hengren, Raymond E., 2515 K St., N.W., Washington, D.C. *1935*
Henig, Harry, Univ. of Cincinnati, Cincinnati, Ohio. *1934*
Henry, John M., Coe Col., Cedar Rapids, Iowa. *1923*
Henry, Robert J., 430 S. Lombard Ave., Oak Park, Ill. *1929*
Herbert, Charles H., Sun Life Assurance Co. of Canada, Montreal, Que., Canada. *1937*
Herbst, Alma, 1865 Franklin Ave., Columbus, Ohio. *1924*
Hermens, Ferdinand A., 1721 Stocker Pl., South Bend, Ind. *1938*
Herrmann, Helen, 1620 Fuller St., N.W., Washington, D.C. *1928*
Herrold, Lloyd D., 2210 Hartzell St., Evanston, Ill. *1938*
Hersey, M. Leonard, Socony-Vacuum Oil Co., Inc., 31 St. James Ave., Boston, Mass. *1939*
Heskin, Oscar E., Univ. Sta., Box 2004, Gainesville, Fla. *1939*
Hess, Herbert W., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1940*
Hess, Ralph H., Ardsley Rd., Scarsdale, N.Y. *1935*
Hession, Charles H., Brooklyn Col., Bedford Ave. and Ave. H, Brooklyn, N.Y. *1940*
Hettinger, Herman S., 4537 Spruce St., Philadelphia, Pa. *1936*
Hewes, Amy, Mount Holyoke Col., South Hadley, Mass. *1906*
Hewetson, Henry W., Univ. of Alberta, Edmonton, Alta., Canada. *1929*
Hewett, William W., Univ. of Cincinnati, Cincinnati, Ohio. *1921*

Hexner, Erwin, Post Box 1073, Chapel Hill, N.C. *1940*
Heyman, George H., Jr., 1621 Nelson Lane, Hewlett, L.I., N.Y. *1938*
Hiatt, Amos, Associated Hospital Service, 370 Lexington Ave., New York, N.Y. *1940*
Hibbard, Benjamin H., Col. of Agric., Madison, Wis. *1908*
Hickman, Walter B., Princeton Univ., Princeton, N.J. *1940*
Hickok, Charles T., Coe Col., Cedar Rapids, Iowa. *1924*
Hicks, Clifford M., Univ. of Nebraska, Lincoln, Neb. *1934*
Hicks, William T., U. S. Dept. of Agric., Bur. of Agric. Econ. Clemson, S.C. *1935*
Hidy, Muriel E. (Mrs.), Wheaton Col., Norton, Mass. *1932*
***Hijakata,** S., 47 Ichibancho, Kojimachi-ku, Tokyo, Japan. *1921*
Hildebrand, George H., Jr., Princeton Univ., Dept. of Econ. and Soc. Inst., Princeton, N.J. *1939*
Hill, Daniel A., 1633 Compton Rd., Cleveland Heights, Ohio. *1931*
Hill, George B., 1303 N. Brand Blvd., Glendale, Calif. *1923*
Hill, James C., Univ. of Chicago, Chicago, Ill. *1940*
Hill, Samuel E., 5 Serpentine Dr., New Rochelle, N.Y. *1939*
Hill, Thomas M., Yale Univ., 403 Sheffield Hall, New Haven, Conn. *1938*
Himadeh, Sa'id Behmed, American Univ., Beirut, Syria. *1928*
Himmelblau, David, 337 E. Chicago Ave., Chicago, Ill. *1914*
Hinman, Albert G., Principia, St. Louis, Mo. *1934*
Hinrichs, Albert F., U. S. Bur. of Labor Statis., Washington, D.C. *1935*
Hjelmstad, J. H., 416 S. 7th St., Moorhead, Minn. *1934*
Hoag, Pierre, Eastman Kodak Co., Kodak Park, Rochester, N.Y. *1940*
Hoagland, Henry E., 2448 Southway Dr., Columbus, Ohio. *1910*
Hobbs, Franklyn, 208 S. La Salle St., Chicago, Ill. *1920*
Hobson, Asher, Univ. of Wisconsin, Col. of Agric., Madison, Wis. *1920*
‡**Hobson,** John A., 3 Gayton Crescent, Hampstead N.W., London, England. *1938*
Hodde, Ferdinand H., 3634 Woodford Rd., Cincinnati, Ohio. *1933*
Hodges, John R., A. and M. Col., Monticello, Ark. *1938*
Hodges, Julian A., Kansas State Agric. Col., Manhattan, Kan. *1928*
Hodgkins, Alton R., Randolph-Macon Woman's Col., Lynchburg, Va. *1926*
Hodgson, James G., 625 Remington St., Fort Collins, Colo. *1935*
Hoffman, George W., Univ. of Pennsylvania, Dept. of Ins., Philadelphia, Pa. *1920*
Hohman, Elmo P., 625 Haven, Evanston, Ill. *1936*
Hoisington, Frederick R., Jr., Int. Tel. and Tel. Corp., 67 Broad St., New York, N.Y. *1935*
Holder, Frederick C., 17 Regent Ave., Lockport, N.Y. *1939*
Holdsworth, John T., Univ. of Miami, Coral Gables, Fla. *1903*
Holladay, James, Univ. of Alabama, School of Com., University, Ala. *1929*
Hollander, Jacob H., Johns Hopkins Univ., Baltimore, Md. *1890*
Hollowell, Walter M., 2314 Dahlia St., Denver, Colo. *1939*
Holly, Julian L., 134 Mt. Auburn St., Cambridge, Mass. *1940*
Holmes, Floyd C., 1359 Hudson Ave., Chicago, Ill. *1934*
Holmes, Frederick B., Fort Barry, Calif. *1937*
Holthausen, Duncan M., 86 Bluff Rd., Palisade, N.J. *1939*
Homan, Paul T., Cornell Univ., Ithaca, N.Y. *1925*
Homberger, Ludwig M., American Univ., 1901 F St., N.W., Washington, D.C. *1939*
Hon, Ralph C., Southwestern Col., Memphis, Tenn. *1928*
Hong, Everette N., Univ. of Southern California, Dept. of Econ., University Park, Los Angeles, Calif. *1940*
Honnold, Junia H., Apt. 24, Barlum Apts., 25 E. Palmer St., Detroit, Mich. *1930*
Hood, Robin, Brookings Inst., Washington, D.C. *1937*
Hoos, Sidney, Univ. of California, Col. of Agric., Berkeley, Calif. *1939*
Hoover, Calvin B., Duke Univ., Econ. Dept., Durham, N.C. *1925*
Hoover, David H., 804 Springfield Ave., Urbana, Ill. *1937*
Hoover, Edgar M., Jr., Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. *1933*
Hoover, Glenn E., Mills Col., Dept. of Econ., Mills College P.O., Calif. *1925*
Hope, John, II, Atlanta Univ., Atlanta, Ga. *1938*
Hopf, Harry A., Hopf Inst. of Management, Windrose Farm, R.R., Ossining, N.Y. *1940*
Hopkin, Francis W., 221 Harrison Ave., Highland Park, N.J. *1927*
Hopkins, John A., Jr., Iowa State Col., Ames, Iowa. *1922*
Hopkins, Louis J., 1385 Hillcrest Ave., Pasadena, Calif. *1911*

Hopkins, William S., Dept. of Econ., Stanford University, Calif. *1934*
Hopson, Howard C., 61 Broadway, New York, N.Y. *1911*
Horak, Jacob, 58 Ohio Ave., Tiffin, Ohio. *1929*
Horne, Gilbert R., 639 Sunset Ave., Windsor, Ont., Canada. *1933*
Horne, Roman L., 6230 33rd St., N.W., Washington, D.C. *1935*
Horner, Robert R., R.R. 6, Box 110, Ann Arbor, Mich. *1929*
Horner, Seward L., General Motors Corp., 1775 Broadway, New York, N.Y. *1923*
Horton, Donald C., U. S. Dept. of Agric., Bur. of Agric. Econ., Div. of Agric. Fin., Washington, D.C. *1926*
Hosmer, Windsor A., Harvard Bus. School, 215 Morgan Hall, Soldiers Field, Boston, Mass. *1929*
Hostutler, Hoyt, 304 E. Dudley Ave., Westfield, N.J. *1939*
Hotchkiss, Hervey D., 130 W. 13th St., New York, N.Y. *1939*
Hotchkiss, Willard E., Carnegie Inst. of Tech., Pittsburgh, Pa. *1902*
Hottenstein, Marcus S., Lincoln Bldg., 60 E. 42nd St., New York, N.Y. *1922*
Houchins, Joseph R., 1208 Lamont St., N.W., Washington, D.C. *1937*
Houston, G. Sidney, First Service Corp., St. Paul, Minn. *1936*
Hovde, Howard T., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1934*
Howard, Charles H., Room 717, 65 Broad St., Rochester, N.Y. *1923*
Howard, Earl D., 1632 Sheridan Rd., Evanston, Ill. *1905*
Howard, Edwin H., Box 796, Lexington, Va. *1925*
Howard, Stanley E., 105 FitzRandolph Rd., Princeton, N.J. *1912*
Howard, T. Levron, 29 Dogwood Rd., Norris, Tenn. *1938*
Howe, Charles B., 6404 31st Pl., N.W., Washington, D.C. *1924*
Howell, Leander D., 4650 Broad Branch Rd., Washington, D.C. *1931*
Howell, Philip L., 4200 Chester Ave., Philadelphia, Pa. *1936*
Howenstine, E. Jay, Northern State Teachers Col., Marquette, Mich. *1939*
Hower, Ralph M., Baker Library, Soldiers Field, Boston, Mass. *1935*
Howey, Richard S., Univ. of Kansas, 106 Admin. Bldg., Lawrence, Kan. *1930*
Hoyle, Harry, Dept. of Labor and Industry, Harrisburg, Pa. *1935*
Hoyt, Elizabeth E., Iowa State Col., Ames, Iowa. *1925*
Hoyt, Homer, Fed. Housing Admin., 1510 H St., N.W., Washington, D.C. *1936*
Hubbard, Joseph B., Harvard Bus. School, Soldiers Field, Boston, Mass. *1914*
Huber, John R., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1934*
Hudson, Hersel W., 603 Vine St., Kent, Ohio. *1929*
Hudson, Philip G., Univ. of Arizona, Dept. of Econ., Tucson, Ariz. *1935*
Huebner, Grover G., Univ. of Pennsylvania, Hogan Hall, Philadelphia, Pa. *1914*
Huebner, Solomon S., 697 S. Highland Ave., Merion, Pa. *1914*
Huegy, Harvey W., Univ. of Illinois, 419 Com. Bldg., Urbana, Ill. *1934*
Huelster, Lowell F., 417 Addison Rd., Riverside, Ill. *1937*
Hughes, James F., 14 Wall St., New York, N.Y. *1940*
Hughes, Molly W. (Mrs.), P.O. Box 49, Entebbe, Uganda (via Liverpool, England). *1936*
Hulse, Anne E., 146-17 Hawthorn Ave., Flushing, N.Y. *1939*
Humphrey, Don D., 1255 New Hampshire Ave., N.W., Washington, D.C. *1933*
Hunsberger, George E., Univ. of Arkansas, School of Bus. Admin., Fayetteville, Ark. *1934*
Hunsberger, Warren S., Princeton Univ., Dept. of Econ. and Soc. Inst., Princeton, N.J. *1935*
Hunt, Bishop C., Hanover, Mass. *1921*
Hunt, Elgin F., 5404 Kimbark Ave., Chicago, Ill. *1933*
Hunt, Pearson, Yale Univ., Sheffield Hall, New Haven, Conn. *1935*
Hunt, Rockwell D., Univ. of Southern California, Los Angeles, Calif. *1908*
Hunt, Stanley B., Textile Economics Bur., Inc., 10 E. 40th St., New York, N.Y. *1928*
Hunter, Merlin H., Univ. of Illinois, 315 Com. Bldg., Urbana, Ill. *1915*
Huntington, Charles C., Ohio State Univ., Columbus, Ohio. *1905*
Huntington, Emily H., Univ. of California, 119 South Hall, Berkeley, Calif. *1925*
Hupp, Burr W., *Christian Advocate*, 1121 McGee St., Kansas City, Mo. *1938*
Hurff, George B., Jr., 29 S. Woodland Ave., Woodbury, N.J. *1935*
Hurja, Emil E., 1370 Nat. Press Bldg., Washington, D.C. *1934*
Hurlin, Ralph G., Russell Sage Found., 130 E. 22nd St., New York, N.Y. *1921*
Husband, William H., 3133 Connecticut Ave., Washington, D.C. *1927*
Huse, Charles P., 13 Pine St., Belmont, Mass. *1908*
Huston, Joseph W., 2036 S. State St., Springfield, Ill. *1934*

Hutcheson, Harold H., Johns Hopkins Univ., Dept. of Polit. Econ., Charles and 34th Sts., Baltimore, Md. *1937*
Hutchins, John G. B., 236 Grant Ave., Highland Park, N.J. *1935*
Hutchinson, Kenneth D., Pennsylvania State Col., State College, Pa. *1930*
Hyde, D. Clark, P.O. Box 1385, Charlottesville, Va. *1921*
Hynning, Clifford J., 1028 Connecticut Ave., N.W., Washington, D.C. *1939*

*__Iles,__ George, Hotel Chelsea, 222 W. 23rd St., New York, N.Y. *1888*
Ingraham, Olin, 727 Pleasant St., Belmont, Mass. *1926*
Inman, Mark K., Univ. of Western Ontario, London, Ont., Canada. *1938*
Innes, John W., Columbia Univ., Dept. of Soc. Sci., New York, N.Y. *1940*
Innis, Harold A., Univ. of Toronto, Toronto, Ont., Canada. *1923*
Inwood, Ernest L., Univ. of Nevada, Dept. of Econ., Reno, Nev. *1939*
Irons, Watrous H., Univ. of Texas, Austin, Tex. *1937*
*__Irwin,__ Dudley M., Chamber of Com., Buffalo, N.Y. *1890*
Irwin, Harold S., 110 N. Franklin St., Room 1313, Chicago, Ill. *1928*
Irwin, William A., American Inst. of Banking, 22 E. 40th St., New York, N.Y. *1934*
Isaacs, Asher, Univ. of Pittsburgh, School of Bus. Admin., Pittsburgh, Pa. *1934*
Ise, John, 1208 Mississippi St., Lawrence, Kan. *1911*

Jackman, William T., Univ. of Toronto, Toronto, Ont., Canada. *1934*
Jackson, Donald, Bur. of Agric. Econ., Div. of Agric. Fin., Washington, D.C. *1923*
Jackson, Dugald C., 5 Mercer Circle, Cambridge, Mass. *1923*
Jackson, J. Hugh, Grad. School of Bus., Stanford University, Calif. *1917*
Jackson, James R., St. Louis Univ., 3674 Lindell Blvd., St. Louis, Mo. *1927*
Jackson, Kathleen C., Hollins College, Va. *1927*
Jacobs, Arthur T., 209 N. Ingalls St., Ann Arbor, Mich. *1938*
Jacobs, Clifford D., State Col. of Washington, Pullman, Wash. *1930*
Jacoby, Neil H., 5529 University Ave., Chicago, Ill. *1933*
Jaffé, William, Northwestern Univ., Locy Hall, Evanston, Ill. *1925*
James, Albert C., Western Reserve Univ., Cleveland, Ohio. *1937*
James, Clifford L., 1687 Guilford Rd., Columbus, Ohio. *1930*
James, F. Cyril, McGill Univ., Montreal, Que., Canada. *1934*
Jameson, Mary E., Nat. Indus. Conf. Bd., 247 Park Ave., New York, N.Y. *1936*
Jamison, Charles L., 108 Tappan Hall, Ann Arbor, Mich. *1923*
Janssen, Hans, Pennsylvania State Col., Hazleton, Pa. *1938*
Jarrett, James M., 4111 N. 25th St., Arlington, Va. *1928*
Jefferis, Raymond P., Jr., 209 Standish Dr., Syracuse, N.Y. *1939*
Jeidels, Otto, Lazard Freres and Co., 120 Broadway, New York, N.Y. *1911*
Jekel, Oscar H., 233 W. Jewell, Kirkwood, Mo. *1934*
Jenison, Elsie S., Box 443, C.I.A., Denton, Tex. *1931*
§**Jenkins,** Edward, General Motors Overseas Corp., 1775 Broadway, New York, N.Y. *1938*
Jenkins, H. P., 70 Willow St., Truro, N.S., Canada. *1935*
Jenkins, John W., Univ. of Georgia, School of Com., Athens, Ga. *1924*
Jenkins, Warder B., 100 Aspen St., Chevy Chase, Md. *1940*
Jenks, Leland H., 18 Weston Rd., Wellesley, Mass. *1929*
Jennings, Henrietta C., Wheaton Col., Norton, Mass. *1927*
Jennings, W. W., 1336 Fontaine Rd., Lexington, Ky. *1923*
Jensen, Jens P., Univ. of Kansas, Dept. of Econ., Lawrence, Kan. *1919*
Jeremiah, J., Box J, Edgartown, Mass. *1911*
Jesness, Oscar B., University Farm, Div. of Agric. Econ., St. Paul, Minn. *1920*
‡**Jèze,** Gaston P., Université de Paris, Paris, France. *1926*
Jocher, Katharine, Univ. of North Carolina, Box 539, Chapel Hill, N.C. *1926*
Johnson, Alvin S., New School of Soc. Res., 66 W. 12th St., New York, N.Y. *1927*
Johnson, Edgar A. J., New York Univ., School of Com., Dept. of Econ., Washington Sq., New York, N. Y. *1928*
Johnson, Edgar H., Emory University, Ga. *1910*
Johnson, Edwin C., Farm Credit Admin., Washington, D.C. *1925*
*__Johnson,__ Emory R., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1893*
Johnson, Ernest A., Lake Forest Col., Lake Forest, Ill. *1925*
Johnson, G. Griffith, Jr., 811 Crescent Dr., Alexandria, Va. *1939*
Johnson, Homer H., 1669 Union Trust Bldg., Cleveland, Ohio. *1913*

Johnson, Keith W., Doane Col., Crete, Neb. *1939*
Johnson, Oliver R., Col. of Agric., Columbia, Mo. *1922*
Johnson, Russell E., Box 775, University, Ala. *1936*
Johnson, Sherman E., 118 N. Jackson St., Arlington, Va. *1932*
Johnson, Walter L., 120 Hooper Ave., Toms River, N.J. *1936*
Johnston, Clarence E., 509 Monroe Ave., Scranton, Pa. *1931*
Johnston, Richard H., Bur. of Railway Econ., Lib., Washington, D.C. *1910*
Jome, Hiram L., De Pauw Univ., Dept. of Econ., Greencastle, Ind. *1924*
Jones, Alvin H., 4014 Danneel St., New Orleans, La. *1938*
Jones, Eliot, Stanford University, Calif. *1909*
Jones, Fred M., Univ. of Illinois, Col. of Com., Urbana, Ill. *1937*
Jones, Grosvenor M., 3700 Massachusetts Ave., N.W., Washington, D.C. *1920*
Jones, Herschel F., 2702 Mason St., Madison, Wis. *1938*
Jones, Montfort, Univ. of Pittsburgh, Pittsburgh, Pa. *1922*
Jones, Ralph C., 302 Sheffield Hall, New Haven, Conn. *1924*
Jones, Thatcher C., Independence Fund of North America, 1 Cedar St., New York, N.Y. *1935*
Jordan, David F., 136 Shoreward Dr., Great Neck, N.Y. *1924*
Jordan, Garrett L., Univ. of Illinois, 302 New Agric. Bldg., Urbana, Ill. *1939*
Jordan, Virgil, 290 Potter Pl., Weehawken, N.J. *1929*
Joseph, Sister M. Edward, Saint Mary's Col., Notre Dame, Holy Cross, Ind. *1939*
Jucius, Michael J., Ohio State Univ., Col. of Com. and Admin., Columbus, Ohio. *1934*
Junkin, William R., Southwestern Col., Memphis, Tenn. *1929*

Kacmarynski, Louis F., Col. of New Rochelle, New Rochelle, N.Y. *1940*
Kähler, Alfred, 66 W. 12th St., New York, N.Y. *1940*
Kahler, Clyde M., 112 Crestview Rd., Bywood Heights, Upper Darby, Pa. *1926*
Kaiser, Carl W., Russell Sage Col., Troy, N.Y. *1929*
Kane, Joseph S., 8625 Dongan Ave., Elmhurst, N.Y. *1938*
Kantor, Harry S., 105 S. Fenwick St., Arlington, Va. *1922*
Kaplan, A. D. H., Univ. of Denver, School of Com., Denver, Colo. *1923*
Kapp, Karl W., 118 W. 11th St., New York, N.Y. *1938*
***Karelsen,** Eph. A., 230 Park Ave., New York, N.Y. *1919*
Karger, Jacob, 476 Park Ave., Weehawken, N.J. *1938*
Kattenhorn, Arthur W., 195 Broadway, New York, N.Y. *1925*
Kaufman, Abraham, 810 Hunts Point Ave., New York, N.Y. *1937*
Kautz, Katharine I., Nat. Cathedral School, Mt. Saint Albans, Washington, D.C. *1932*
Kayden, Eugene M., Univ. of the South, Sewanee, Tenn. *1922*
Keays, Eldred M., 110 E. Wisconsin Ave., Milwaukee, Wis. *1911*
Kebker, Vant W., Univ. of Kansas, School of Bus., Lawrence, Kan. *1938*
Keener, J. Ward, 155 N. Washington St., Delaware, Ohio. *1937*
Keezer, Dexter M., Reed Col., Portland, Ore. *1925*
Keir, John S., Dennison Manufacturing Co., Framingham, Mass. *1934*
Keir, Malcolm, Dartmouth Col., Hanover, N.H. *1921*
Keirstead, Burton S., Univ. of New Brunswick, Fredericton, N.B., Canada. *1932*
Keister, Albert S., North Carolina Col. for Women, Greensboro, N.C. *1924*
Keith, E. Gordon, Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1936*
Keller, Forrest E., West Virginia Univ., Dept. of Econ., Morgantown, W.Va. *1936*
Keller, Henry, Jr., 419 Lincoln Ave., Highand Park, New Brunswick, N.J. *1930*
Keller, Louis A., Lake Forest Col., Lake Forest, Ill. *1929*
Kelley, Nicholas, 70 Broadway, New York, N.Y. *1927*
Kelley, Pearce C., Univ. of Arkansas, School of Bus., Fayetteville, Ark. *1928*
Kellogg, Lester S., Ohio State Univ., Col. of Com. and Admin., Columbus, Ohio. *1928*
Kellogg, Ruth M., Lilacstead, Wilton, Conn. *1929*
Kelly, Armand W., Deep Springs, Calif. *1939*
Kelly, Edward J., P.O. Box 446, Santa Clara, Calif. *1940*
Kelly, Thomas H., The University, Faculty of Com., Cape Town, South Africa. *1930*
Kelsey, Carl, Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1909*
Kelso, Harold, Miami Univ., Oxford, Ohio. *1934*
Kemmerer, Donald L., 1006 W. Armory Ave., Champaign, Ill. *1934*
Kemmerer, Edwin W., Princeton Univ., Princeton, N.J. *1903*

Kemp, Arthur, 641 Library Pl., Evanston, Ill. *1939*
Kemp, Hubert R., Univ. of Toronto, Toronto, Ont., Canada. *1923*
Kendrick, M. Slade, 225 Willard Way, Ithaca, N.Y. *1922*
Kennedy, Donald D., MacEvoy Ct., 140 Roseville Ave., Newark, N.J. *1930*
Kennedy, James B., Clinton, S.C. *1935*
Kennedy, Stephen J., 214 Church St., New York, N.Y. *1935*
Kent, Raymond P., 208 Thompson St., Latrobe, Pa. *1934*
Kerby, Jerome L., Trinity Univ., Waxahachie, Tex. *1938*
Kerestesy, Kathrine, 911 7th Ave., New York, N.Y. *1928*
Kerr, Clark, 488 Harvard, Palo Alto, Calif. *1936*
Kerr, Peyton, 1733 20th St., N.W., Washington, D.C. *1938*
Kerry, A. S., Jr., 1117 Federal Ave., Seattle, Wash. *1927*
Kerschbaum, Paul R., 5721 Drexel Ave., Chicago, Ill. *1936*
Kershaw, Joseph A., Hofstra Col., Hempstead, L.I., N.Y. *1939*
Kessler, William C., Colgate Univ., Hamilton, N.Y. *1938*
Ketchum, Marshall D., Univ. of Kentucky, Lexington, Ky. *1937*
‡**Keynes,** John M., Cambridge Univ., Cambridge, England. *1932*
***Keynes,** John N., 6 Harvey Rd., Cambridge, England. *1888*
Khérian, Grégoire, Le Université, Hanoi, Indo-China. *1933*
Kibler, Thomas L., Ohio State Univ., Col. of Com. and Journ., Columbus, Ohio. *1911*
Kidd, Charles V., 2126 Key Blvd., Apt. 887, Arlington, Va. *1938*
Kidner, Frank L., Univ. of California, Dept. of Econ., Berkeley, Calif. *1937*
Kiekhofer, William H., 1919 Arlington Pl., Madison, Wis. *1914*
Kiernan, Charles J., 14 Fairbanks St., Hillside, N.J. *1933*
Kifer, Russell S., U. S. Dept. of Agric., Bur. of Agric. Econ., Washington, D.C. *1924*
Kilduff, Vera R. (Mrs.), Pine Mountain Settlement School, Pine Mountain, Harlan Co., Ky. *1939*
Killough, Lucy W. (Mrs.), Wellesley Col., Dept. of Econ., Wellesley, Mass. *1921*
Kimball, Milo, Ohio State Univ., Col. of Com. and Admin., Columbus, Ohio. *1921*
Kimberland, Kendall G., 10 Monroe St., Apt. JH-PH, New York, N.Y. *1935*
Kincaid, E. A., University, Va. *1922*
Kindleberger, Charles P., Casinostrasse 14, Basle, Switzerland. *1935*
King, Alan F., 1583 Rose Villa St., Pasadena, Calif. *1935*
King, Everett E., 503 Indiana Ave., Urbana, Ill. *1934*
King, Harold J., Univ. of Pittsburgh, Dept. of Acctg., Pittsburgh, Pa. *1938*
King, Robert C., U. S. Tariff Com., Washington, D.C. *1937*
King, Willford I., 28 Shore Rd., Douglaston, N.Y. *1911*
Kinmonth, J. Lyle, Ivy Hedge, Asbury Park, N.J. *1913*
***Kinosita,** Yetaro, 154, Imasatocho, Shirokane, Shibaku, Tokyo, Japan. *1904*
Kinsella, Thomas, State Col. for Teachers, Albany, N.Y. *1932*
Kinsman, Delos O., American Univ., Washington, D.C. *1926*
Kirby, Richard M., Mary Washington Col., Fredericksburg, Va. *1940*
Kirk, Lester K., Standard Accident Ins. Co., 640 Temple Ave., Detroit, Mich. *1927*
Kirk, William, Pomona Col., Claremont, Calif. *1903*
Kirkpatrick, A. Lowell, Brown Univ., Dept. of Econ., Providence, R.I. *1937*
Kirshen, Himy B., Univ. of Maine, Dept. of Econ. and Soc., Orono, Me. *1939*
Kirshman, John E., Univ. of Nebraska, Sta. A, Lincoln, Neb. *1918*
Kjellstrom, Erik T. H., Georgetown Univ., Washington, D.C. *1938*
Klaragard, Sever, 1118 St. Olaf Ave., Northfield, Minn. *1921*
Kleene, Gustav A., Trinity Col., Hartford, Conn. *1898*
Klein, Joseph J., 19 W. 44th St., New York, N.Y. *1909*
Klein, Julius, 2141 Wyoming Ave., N.W., Washington, D.C. *1911*
Klein, Philip, New York School of Soc. Work, 122 E. 22nd St., New York, N.Y. *1936*
Kline, George W., 600 N. Church St., Fayette, Mo. *1939*
Klingenstein, Joseph, 120 Broadway, New York, N.Y. *1936*
Knaf, Henry G., 4 Irving Pl., Room 263-S, New York, N.Y. *1939*
Knapp, Joseph G., Farm Credit Admin., Cooperative Div., Washington, D.C. *1927*
Knapp, Thomas M., St. Louis Univ., School of, Com. and Fin., 3674 Lindell Blvd., St. Louis, Mo. *1940*
Knappen, Laurence S., 216 S. 2nd Ave., New Brunswick, N.J. *1934*
Knauth, Oswald W., 27 W. 67th St., New York, N.Y. *1911*
Knight, Bruce W., Dartmouth Col., Dept. of Econ., Hanover, N.H. *1939*

Knight, Earl L., Duquesne Univ., 331 4th Ave., Pittsburgh, Pa. *1937*
Knight, Frank H., Univ. of Chicago, Chicago, Ill. *1915*
Knight, Melvin M., Univ. of California, Dept. of Econ., Berkeley, Calif. *1924*
Knipe, James L., 58 Huntington St., New Haven, Conn. *1937*
Knox, Frank A., Queen's Univ., Dept. of Econ., Kingston, Ont., Canada. *1926*
Kobrock, John P., 230 Harvard Circle, Newtonville, Mass. *1940*
Kochenderfer, C. C., Kent State Univ., Kent, Ohio. *1940*
Koenig, William H., Columbia Univ., 619 School of Bus., New York, N.Y. *1930*
Kogel, George, 1724 President St., Brooklyn, N.Y. *1938*
Kohanovsky, Nicholas J., Elija iela 12, dz. 11, Riga, Latvia. *1926*
Kohler, Eric L., T.V.A., Knoxville, Tenn. *1939*
Kohlerman, James H., 302 W. 12th St., New York, N.Y. *1937*
Kolchin, Morris, 375 Riverside Dr., New York, N.Y. *1932*
Komasaki, Toshio, 787 5-chome Inetsuke, Ouijiku, Tokyo, Japan. *1923*
Koontz, Harold D., Colgate Univ., Hamilton, N.Y. *1933*
Korey, Edward L., 864 Carroll St., Brooklyn, N.Y. *1940*
Kouperman, A. Boris, 130 N. Wells St., Room 639, Chicago, Ill. *1935*
Kozelka, Richard L., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1923*
Kranold, Herman, Talladega Col., Talladega, Ala. *1937*
Krapf, Robert C., Univ. of Illinois, 437 Com. Bldg., Urbana, Ill. *1939*
Krauss, Daniel T., 603 E. Cecil St., Springfield, Ohio. *1935*
Kreps, Theodore J., Cosmos Club, Washington, D.C. *1939*
Kriegel, M. E., 116 Fort Greene Pl., Brooklyn, N.Y. *1940*
Krueger, Maynard C., Univ. of Chicago, Chicago, Ill. *1940*
Kruesi, Paul J., Southern Ferro-Alloys Co., Chattanooga, Tenn. *1934*
Kube, Harold D., 2831 Beechwood Circle, Arlington, Va. *1940*
Kuhn, Howard, Poughkeepsie Elementary Day School, Hooker and Grand Aves., Poughkeepsie, N.Y. *1939*
Kuhns, William R., American Bankers Asso., 22 E. 40th St., New York, N.Y. *1934*
Kusik, John E., 70 Midland Ave., Montclair, N.J. *1934*
Kuznets, Simon S., Nat. Bur. of Econ. Res., Room 1022, 1819 Broadway, New York, N.Y. *1933*
Kyrk, Hazel, 5717 Kimbark Ave., Chicago, Ill. *1920*

Labastille, Ferdinand M., 111 Haddon Pl., Upper Montclair, N.J. *1936*
Labovitz, Israel M., Illinois Tax Com., 33 N. La Salle St., 27th Fl., Chicago, Ill. *1932*
Lachmann, Karl E., 4719 16th St., Arlington, Va. *1938*
Lacy, Mary G., 3407 34th Pl., Washington, D.C. *1924*
Lagerquist, Walter E., 100 Edgars Lane, Hastings-on-the-Hudson, N.Y. *1910*
Laidler, Harry W., 218 Garfield Pl., Brooklyn, N.Y. *1924*
Laing, Graham A., California Inst. of Tech., Pasadena, Calif. *1938*
Laing, Lemuel L., 909 Sybil St., Ann Arbor, Mich. *1934*
Laird, Noel P., Franklin and Marshall Col., Lancaster, Pa. *1927*
Lake, Wilfred S., 69 Columbus St., Newton Highlands, Mass. *1928*
Lamb, George A., Wooten Dr., Lee Blvd. Heights, Falls Church, Va. *1934*
Lamke, Edwin A., T.V.A., Knoxville, Tenn. *1930*
Lamont, Thomas W., 23 Wall St., New York, N.Y. *1918*
Landauer, Carl, 1317 Arch St., Berkeley, Calif. *1935*
Landon, Charles E., Duke Univ., Dept. of Econ., Durham, N.C. *1939*
Landry, Robert J., Sheldon Ct., Ithaca, N.Y. *1939*
Lane, S. Owen, Univ. of Southern California, Dept. of Econ., University Park, Los Angeles, Calif. *1940*
Lanfear, Vincent W., Univ. of Pittsburgh, Cathedral of Learning, Pittsburgh, Pa. *1920*
Lang, Aldon S., Box 3805, Texas State Col. for Women Sta., Denton, Tex. *1929*
Lange, Oskar, Univ. of Chicago, Dept. of Econ., Chicago, Ill. *1938*
Langmuir, Dean, 90 Broad St., New York, N.Y. *1913*
Langshaw, Walter H., P.O. Box 815, New Bedford, Mass. *1913*
Langum, John K., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1937*
La Qua, Sister M. Edouarda, Col. of St. Catherine, St. Paul, Minn. *1935*
Larcom, Russell C., John B. Stetson Univ., De Land, Fla. *1936*
Larkin, George R., 315 N. Stratton St., Gettysburg, Pa. *1938*
Larson, Adlowe L., Oklahoma A. and M. Col., Stillwater, Okla. *1937*

Larson, Henrietta M., Harvard Univ., Grad. School of Bus., Soldiers Field, Boston, Mass. *1937*
Lassen, Andrew P., San Mateo Junior Col., San Mateo, Calif. *1930*
Latimer, Murray W., 2911 Albemarle St., N.W., Washington, D.C. *1925*
Latour, C. Charles, 10 Meadway, Bronxville, N.Y. *1922*
Lauterbach, Albert, 11 Washington Ter., New York, N.Y. *1939*
Lawres, Irving A. J., Eton Hall, Scarsdale, N.Y. *1933*
Lawson, Eric W., Susquehanna Univ., Selinsgrove, Pa. *1940*
Lay, Chester F., Univ. of Texas, School of Bus. Admin., Austin, Tex. *1933*
‡**Layton,** Sir Walter T., *The Economist*, London, England. *1932*
Learned, Edmund P., Harvard Bus. School, Soldiers Field, Boston, Mass. *1923*
Leavens, Dickson H., Cowles Commission, Univ. of Chicago, Chicago, Ill. *1929*
Leavitt, William L., Univ. of Illinois, 437 Com. Bldg., Urbana, Ill. *1939*
Lederer, Walther, Queens Col., Flushing, N.Y. *1936*
Ledig, Alma K., 6910 Heyward St., Philadelphia, Pa. *1937*
Lee, Frederic E., Univ. of Illinois, 311 Com. Bldg., Urbana, Ill. *1930*
Lee, Harry H., 750 Arlington Village, 1600 S. Barton St., Arlington, Va. *1935*
Lee, Maurice W., 122 E. 4 North St., Logan, Utah. *1939*
Leese, Charles, Centre Col., Danville, Ky. *1927*
Leffingwell, R. C., 38 E. 69th St., New York, N.Y. *1921*
Leffler, George L., Pennsylvania State Col., State College. Pa. *1937*
Leffler, Ray V., Hanover, N.H. *1920*
Legan, William E., 1014 Pine St., St. Louis, Mo. *1940*
Lehmann, Fritz W., 5 E. 10th, New York, N.Y. *1939*
Leigh, Warren W., Municipal Univ. of Akron, Akron, Ohio. *1926*
Leinbach, Joseph N., Lynchburg Col., Lynchburg, Va. *1936*
Leiserson, William M., Nat. Mediation Bd., Washington, D.C. *1915*
Leland, Rosco G., 535 N. Dearborn St., Chicago, Ill. *1940*
Leland, Simeon E., Univ. of Chicago, Dept. of Econ., Chicago, Ill. *1921*
Leland, Thomas W., A. and M. Col., College Station, Tex. *1931*
Lemon, Thomas A., State Teachers Col., Dept. of Econ., Cheyney, Pa. *1938*
Leonard, J. L., Univ. of Southern California, Los Angeles, Calif. *1927*
Leonard, William N., Univ. of Connecticut, Storrs, Conn. *1940*
Leonard, William R., 6120 Utah Ave., N.W., Washington, D.C. *1929*
Leontief, Wassily W., 16 Kirkland Rd., Cambridge, Mass. *1937*
Lerner, Abba P., Univ. of Virginia, School of Econ., Charlottesville, Univ. Sta., Va. *1940*
Le Rossignol, James E., Sta. A, Lincoln, Neb. *1896*
Lescohier, Don D., 809 Oneida Pl., Madison, Wis. *1913*
Lesher, Carl E., Pittsburgh Coal Co., Pittsburgh, Pa. *1921*
Lesser, Arthur, Jr., 29 W. 8th St., New York, N.Y. *1940*
Lester, Allen H., 4302 N. 4th St., Arlington, Va. *1939*
Lester, Richard A., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1929*
Leven, Maurice, R.F.D. 1, East Falls Church, Va. *1938*
Levin, Mitchell J., 32 E. 36th St., New York, N.Y. *1940*
Levin, Samuel M., 12515 Broadstreet, Detroit, Mich. *1921*
Levin, William, 76-09 34th Ave., Jackson Heights, N.Y. *1935*
Levine, Albert J., S. J. Tilden High School, E. 57th St., Brooklyn, N.Y. *1939*
Levine, Alexander T., 6026 Haverford Ave., Philadelphia, Pa. *1938*
Levy, Saul, 1 Wall St., New York, N.Y. *1917*
Lewis, Ben W., Oberlin Col., Dept. of Econ., Oberlin, Ohio. *1923*
Lewis, Edwin H., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1940*
Lewis, Howard T., Harvard Grad. School of Bus., Soldiers Field, Boston, Mass. *1928*
Lewis, Mabel S., 4 E. 9th St., New York, N.Y. *1935*
***Lewisohn,** Adolph, 61 Broadway, New York, N.Y. *1921*
Lewisohn, Sam A., 61 Broadway, New York, N.Y. *1912*
Lichtenstein, Walter, First Nat. Bank, Chicago, Ill. *1921*
Liepmann, Kaethe, 39 Mecklenburgh Sq., London, W.C.1, England. *1939*
Lieson, William A., 17 Litchfield St., Springfield, Mass. *1935*
Lillaston, John B., 1902 Colonial Ter., Arlington, Va. *1940*
Lin, Lin, International House, 500 Riverside Dr., New York, N.Y. *1936*
Lincoln, Edmond E., Room 9136 Du Pont Bldg., Wilmington, Del. *1914*

Lindman, Bertram H., National Highway Users Conference, 938 Nat. Press Bldg, Washington, D.C. *1934*

***Lindsay,** Samuel M., Columbia Univ., 305 Fayerweather Hall, New York, N.Y. *1894*

Linerode, Arthur A., 15547 Myrtle Ave., Harvey, Ill. *1929*

Lingham, Clarence H., 15 Ashburton Pl., Boston, Mass. *1936*

Lingle, Bowman C., 115 W. Monroe St., Chicago, Ill. *1934*

Linville, Francis A., 19 S. Park, Hanover, N.H. *1936*

Lipkowitz, Irving, U. S. Court House, Room 1091, Foley Sq., New York, N.Y. *1939*

Lipman, F. L., c/o Wells Fargo Bank and Union Trust Co., San Francisco, Calif. *1894*

Lippincott, Harold E., 43 Cedar St., New York, N.Y. *1898*

Lippincott, Isaac, Washington Univ., St. Louis, Mo. *1911*

Litman, Simon, Univ. of Illinois, 320 Com. Bldg., Urbana, Ill. *1909*

Livermore, Shaw, Univ. of Buffalo, School of Bus. Admin., Buffalo, N.Y. *1935*

Livingston, George, Old Orchard Farm, Champaign, Ill. *1921*

Livingston, Joseph A., *Business Week*, 330 W. 42nd St., New York, N.Y. *1940*

Locke, Henry D., Liberty Mutual Ins. Co., 175 Berkeley St., Boston, Mass. *1935*

Lockhart, Oliver C., 400 Ave. Haig, Shanghai, China. *1904*

Lockley, Lawrence C., Curtis Publishing Co., Philadelphia, Pa. *1929*

Locklin, D. Philip, 1106 S. Garfield St., Urbana, Ill. *1922*

Lockling, William B., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1928*

Loftus, John A., Holy Cross Col., Worcester, Mass. *1940*

Logan, Harold A., Univ. of Toronto, Dept. of Econ., Toronto, Ont., Canada. *1920*

Logan, Lyman S., Economics Statistics, Inc., 120 Wall St., New York, N.Y. *1940*

Logan, Robert R., Univ. of New Mexico, Dept. of Econ. and Bus. Admin., Albuquerque, N. M. *1931*

Loman, Harry J., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1934*

Long, Clarence D., Jr., Wesleyan Univ., Middletown, Conn. *1939*

Long, Dean, Evansville Col., Evansville, Ind. *1928*

Long, John J., 218 W. 2nd St., Aberdeen, Wash. *1930*

Long, Louis J., Allegheny Col., Meadville, Pa. *1940*

Long, Thomas G., 1436 Chicago Blvd., Detroit, Mich. *1924*

Longman, Donald R., Univ. of Rochester, Rochester, N.Y. *1940*

Longobardi, Cesare, Via Cagliari 13, Rome, Italy. *1923*

Loomis, Robert H., 190 Forest Ave., West Newton, 65, Mass. *1915*

Lorenz, Max O., 3510 Porter St., N.W., Washington, D.C. *1905*

‡**Loria,** Achille, Universitá di Torino, Turin, Italy. *1926*

Lorig, Arthur N., Univ. of Washington, Seattle, Wash. *1936*

Lorwin, Lewis L., Fairfax Hotel, Washington, D.C. *1916*

Losee, Gordon C., Univ. of Illinois, 318 Com. Bldg., Urbana, Ill. *1937*

Loucks, William N., Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1925*

Lough, William H., 285 Madison Ave., New York, N.Y. *1908*

Lounsbury, Raymond H., Russell Sage Col., Troy, N.Y. *1928*

Lovass, Leslie, Brookings Inst., 722 Jackson Pl., N.W., Washington, D.C. *1936*

Love, Joseph L., 1806 Kenwood Ave., Austin, Tex. *1940*

Love, Robert A., 17 Lexington Ave., New York, N.Y. *1925*

Lovejoy, Frank W., 56 Berkeley St., Rochester, N.Y. *1914*

Lovenstein, Meno, Rockford Col., Rockford, Ill. *1938*

Lowden, Frank O., Oregon, Ill. *1901*

§**Lowenthal,** Esther, 76 Crescent St., Northampton, Mass. *1910*

Lubin, Isador, Commissioner of Labor Statistics, Washington, D.C. *1932*

Lucas, Arthur F., Clark Univ., Worcester, Mass. *1921*

Lucas, John W., Univ. of Omaha, Omaha, Neb. *1935*

Luce, Robert, 91 Summer St., Waltham, Mass. *1911*

Lukaczer, Moses, 846 Hewitt Pl., Bronx, New York, N.Y. *1938*

Luke, Myron H., State Inst. of Applied Agric., Farmingdale, L.I., N.Y. *1939*

Lukens, Samuel J., Univ. of Pittsburgh, Pittsburgh, Pa. *1930*

Lumpkin, Katharine D., 47 Belmont Ave., Northampton, Mass. *1932*

Lund, Fin, Legacion de Dinamarca, 14a Calle de Puebla 326, Mexico, D.F. *1919*

Lunden, Laurence R., 3700 48th Ave. S., Minneapolis, Minn. *1930*

Luten, Daniel B., 940 Consolidated Bldg., Indianapolis, Ind. *1930*

Luthringer, George F., 4640 Reservoir Rd., Washington, D.C. *1930*

Lutz, Friedrich A., 12 Prospect Apts., Princeton, N.J. *1938*

Lutz, Harley L., 56 Battle Rd., Princeton, N.J. *1910*

Luxton, George, 17 Dunster St., Apt. 26, Cambridge, Mass. *1938*

Lynch, David, Drake Univ., Des Moines, Iowa. *1940*

Lynch, Edward S., 114 Engineering Hall, Ames, Iowa. *1936*

Lynd, Robert S., 75 Central Park W., New York, N.Y. *1939*

Lyne, James G., 30 Church St., Room 940, New York, N.Y. *1935*

Lynn, Gault W., Dept. of Econ., Stanford University, Calif. *1938*

Lynsky, Myer, Room 603, 136 Front St., New York, N.Y. *1940*

Lyon, Hastings, Columbia Univ., School of Bus., New York, N.Y. *1912*

Lyon, Leverett S., 1 N. La Salle St., Chicago, Ill. *1923*

Macaulay, Fred R., Bernstein-Macaulay, Inc., 250 Park Ave., New York, N.Y. *1919*

***MacDuffie,** John, MacDuffie School, 182 Central St., Springfield, Mass. *1893*

MacGarvey, Charles J., 215 Middle Neck Rd., Great Neck, N.Y. *1940*

MacGibbon, Duncan A., Bd. of Grain Commissioners for Canada, Winnipeg, Man., Canada. *1911*

MacGregor, Donald C., Univ. of Toronto, Dept. of Polit. Econ., Toronto 5, Ont., Canada. *1930*

Machlup, Fritz, Univ. of Buffalo, Dept. of Econ., Buffalo, N.Y. *1935*

Mack, Russell H., 31 Whitemarsh Rd., Ardmore, Pa. *1931*

MacKenzie, Donald H., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1939*

MacKenzie, T. Findlay, 125 W. 12th St., New York, N.Y. *1928*

Mackintosh, William A., Dept. of Finance, Ottawa, Ont., Canda. *1918*

Maclaurin, W. Rupert, Massachusetts Inst. of Tech., Room 1-282, Cambridge, Mass. *1937*

MacLeish, John E., 134 S. La Salle St., Chicago, Ill. *1934*

Macon, Hershal L., 3812 N. Broadway, Knoxville, Tenn. *1934*

Macy, C. Ward, Coe Col., Cedar Rapids, Iowa. *1935*

Madden, John T., 32 Waverly Pl., New York, N.Y. *1920*

Maddox, James G., U. S. Dept. of Agric., Farm Security Admin., Washington, D.C. *1935*

Madeleine, Sister M. Grace, Immaculata Col., Immaculata, Pa. *1936*

Magdoff, Harry S., 1519 Jefferson Bldg., 1015 Chestnut St., Philadelphia, Pa. *1936*

Magee, James D., New York Univ., Washington Sq., New York, N.Y. *1911*

Magee, Mabel A., Wells Col., Aurora, N.Y. *1925*

Magnusson, Leifur, 3223 Northampton St., Washington, D.C. *1924*

Maher, Amy G., 12 Quincy St., Chevy Chase, Md. *1925*

Malin, Patrick M., 221 Princeton Ave., Swarthmore, Pa. *1930*

Malisoff, Harry, 1365 Teller Ave., New York, N.Y. *1938*

Malott, E. Orth, 1509 E. Duval St., Philadelphia, Pa. *1929*

Maltbie, Milo R., 80 Centre St., New York, N.Y. *1898*

Mandel, Bernard, Park Towers Apts., Kemble and Ogontz Aves., Philadelphia, Pa. *1940*

Mandeville, Merton J., Univ. of Illinois, 314 Com. Bldg., Urbana, Ill. *1933*

Manes, Alfred, Univ. of Indiana, School of Bus. Admin., Bloomington, Ind. *1936*

Maneval, Raymond K., Pennsylvania State Col. Undergrad. Center, Altoona, Pa. *1940*

Mangold, George B., 3764 Olympiad Dr., Los Angeles, Calif. *1910*

Manhart, Lewis F., Bowling Green State Univ., Bowling Green, Ohio. *1937*

Manley, John H., 215 Hart Blvd., Staten Island, N.Y. *1940*

Manly, Lewis F., Tufts College, Mass. *1928*

Mann, Fritz K., 15 W. Kirke St., Chevy Chase, Md. *1936*

Marble, John M., 2055 Ashbourne Dr., South Pasadena, Calif. *1927*

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Marburg, Theodore F., Univ. of Nebraska, Col. of Bus. Admin., Lincoln, Neb. *1938*

Marget, Arthur W., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1926*

Marie, Sister Joseph, Marymount Col., Salina, Kan. *1938*

Marlatt, Abby L., 612 Howard Pl., Madison, Wis. *1924*

Marquard, Elva, 1634 Eye St., N.W., Washington, D.C. *1940*

Marquardt, Philomena L., 4445 Post Rd., Apt. 5-H, New York, N.Y. *1935*

Marquis, Ralph W., 3206 Wisconsin Ave., N.W., Washington, D.C. *1929*

Marschak, Jakob, 100 Buckingham Rd., Yonkers-Nepperhan, N.Y. *1939*

Marsh, Charles F., Col. of William and Mary, Williamsburg, Va. *1929*

Marshall, George, 38 E. 57th St., New York, N.Y. *1928*

Marshall, Leon C., 7007 Rolling Rd., Chevy Chase, Md. *1904*
Marshall, Stewart M., 430 Nevada Ave., Palo Alto, Calif. *1933*
Marston, Oliver J., 1656 Wellington Rd., Los Angeles, Calif. *1919*
Martin, Edgar W., Beloit Col., Beloit, Wis. *1940*
Martin, James W., 124 Arcadia Pk., Lexington, Ky. *1923*
Martin, Margaret E., 5 Northern Blvd., Albany, N.Y. *1938*
Martin, Oscar R., Univ. of Nebraska, Lincoln, Neb. *1911*
Martin, Robert F., Grad. School of Bus., Stanford University, Calif. *1939*
Martin, Selden O., 700 Esplanade, Pelham Manor, N.Y. *1904*
Martin, William M., Fed. Res. Bank, St. Louis, Mo. *1910*
Marvin, Donald M., Tulane Univ., Col. of Com., New Orleans, La. *1925*
Masiko, Peter, Jr., 3838 N. Linder Ave., Chicago, Ill. *1937*
Mason, Edward S., 9 Channing St., Cambridge, Mass. *1934*
Mason, John E., 115A N. Agric. Bldg., University, La. *1940*
Mason, William E., Multnomah Col., 831 S.W. 6th Ave., Portland, Ore. *1938*
Massel, Mark S., Clinton, Md. *1936*
Masson, Robert L., Grad. School of Bus., Soldiers Field, Boston, Mass. *1923*
Matchett, Gerald J., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1939*
Matherly, Walter J., Univ. of Florida, Gainesville, Fla. *1920*
Matteson, James S., 902 Fidelity Bldg., Duluth, Minn. *1919*
Matthews, James M., 130 Washington St., Wellesley Hills, Mass. *1937*
***Mattioli,** Raffaele, via Bigli 15, Milan, Italy. *1938*
Mauldon, Frank R. E., Dept. of Statis., Canberra, A.C.T., Australia. *1930*
Maverick, Lewis A., 405 Hilgard Ave., Los Angeles, Calif. *1939*
Max, William D., 208 Sterling St., Brooklyn, N.Y. *1921*
Maxwell, James A., Clark Univ., Worcester, Mass. *1925*
May, Alonzo B., Univ. of Denver, Denver, Colo. *1938*
May, Elizabeth S., 1243 30th St., N.W., Washington, D.C. *1935*
†**May,** George O., 56 Pine St., New York, N.Y. *1908*
May, John W., Univ. of Pittsburgh, Johnstown Center, Johnstown, Pa. *1940*
May, Richard A., Bernardsville, N.J. *1927*
May, Stacy, Rockefeller Found., 49 W. 49th St., New York, N.Y. *1920*
Mayer, Joseph, Lib. of Congress, Washington, D.C. *1921*
Mayer, Leo K., 215 Middle Neck Rd., Great Neck, L.I., N.Y. *1935*
Mayer, Robert W., Lehigh Univ., Bethlehem, Pa. *1933*
Maynard, Eugene L., 2257 Ridge Ave., Evanston, Ill. *1929*
Maynard, Harold H., Ohio State Univ., Col. of Com., Columbus, Ohio. *1921*
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McCabe, David A., 111 FitzRandolph Rd., Princeton, N.J. *1909*
McCaffrey, William T., c/o C. H. Maltby, 104 S. Salina St., Syracuse, N.Y. *1938*
McCahan, David, 607 Strath Haven Ave., Swarthmore, Pa. *1934*
McCarthy, Patricia M., 427 85th St., Brooklyn, N.Y. *1939*
McCarthy, S. Lane, 5720 Woodlawn Ave., Chicago, Ill. *1936*
McCartney, Ernest R., Kansas State Col., Dept. of Econ., Hays, Kan. *1928*
McClintic, Joseph O., 1080 N. Chester, Pasadena, Calif. *1937*
McClung, Reid L., Univ. of Southern California, Los Angeles, Calif. *1915*
McCollough, Elzy V., Tarkio Col., Tarkio, Mo. *1936*
McConagha, William A., 932 E. Commercial St., Appleton, Wis. *1925*
McConnell, Donald W., New York Univ., Washington Square Col., New York, N.Y. *1935*
McCracken, Harlan L., Louisiana State Univ., University, La. *1933*
McCrea, Roswell C., Columbia Univ., New York, N.Y. *1899*
McCreary, James, F.H.A., 201 N. 4th St., St. Louis, Mo. *1938*
McCullough, Joseph V., Duquesne Univ., 331 4th Ave., Pittsburgh, Pa. *1940*
McDaniel, Joseph M., Jr., Box 52, Hanover, N.H. *1935*
McDiarmid, Orville J., Carnegie Inst. of Tech., Pittsburgh, Pa. *1939*
McDonald, Jesse, Third Nat. Bank Bldg., St. Louis, Mo. *1911*
McDonald, Joseph L., Hanover, N.H. *1925*
McDonough, Charles A., 18 Tremont St., Boston, Mass. *1914*
McDonough, John E., S.E.C., Washington, D.C. *1920*
McFarland, Ellis D., 9 Dexter Park Ave., Union Stock Yards, Chicago, Ill. *1937*

McGarry, Edmund D., Univ. of Buffalo, Buffalo, N.Y. *1923*
McGinnis, Robert D., 366 Fairmont Ave., Zanesville, Ohio. *1930*
McGrath, William H., Yarrow Point, Bellevue, Wash. *1919*
McGraw, Booker T., Lincoln Univ., Jefferson City, Mo. *1931*
McGregor, Harlan E., Univ. of North Dakota, Grand Forks, N.D. *1937*
McGuire, Constantine E., Cosmos Club, 1520 H St., Washington, D.C. *1922*
McGuire, Carl W., De Pauw Univ., Greencastle, Ind. *1937*
McGuire, John A., 1924 Campbell Ave., Schenectady, N.Y. *1938*
McIndoe, Robert L., 2501 Davidson Ave., New York, N.Y. *1929*
McIntyre, Francis E., Dept. of Econ., Stanford University, Calif. *1938*
McIsaac, Archibald M., 25 Jefferson Rd., Princeton, N.J. *1925*
McKay, Marion K., Univ. of Pittsburgh, Pittsburgh, Pa. *1921*
McKee, Captain W., Westminster Col., Lib., New Wilmington, Pa. *1937*
McKinley, Samuel J., 34 Ballard St., Newton Centre, Mass. *1928*
McKinney, David H., Normal Blvd., Bowling Green, Ky. *1936*
McKinnon, Cyril N., St. Stanislaus Seminary, Cleveland, Ohio. *1936*
McLaren, Walter W., Williams Col., Williamstown, Mass. *1911*
McLaughlin, Frederick C., Columbia Univ., Sarasota Hall, New York, N.Y. *1940*
McLaughlin, Glenn E., 9800 Warren St. (Linden), Silver Spring, Md. *1929*
McLean, Evelyn M. (Mrs. Jack W.), 415 N. New Hampshire Ave., Los Angeles, Calif. *1938*
McLean, Francis H., 122 E. 22nd St., Room 1504, New York, N.Y. *1898*
McLure, Joe H., Box 4027, Atlanta, Ga. *1934*
McMahon, Theresa S. (Mrs.), Mercer Island, R.R., Wash. *1913*
McManus, Thomas F., Col. of New Rochelle, New Rochelle, N.Y. *1935*
McMullan, Wilbur N., Montgomery Ave. and Paper Mill Rd., Chestnut Hill, Pa. *1931*
McMurray, Hugh D., 400 Stratmore Ave., Pittsburgh, Pa. *1938*
McNatt, Emmett B., Univ. of Illinois, Urbana, Ill. *1934*
McNaughton, Floyd, 130 Mayfield Ave., N.E., Grand Rapids, Mich. *1923*
McNaughton, Wayne L., Univ. of North Dakota, School of Com., Univ. Sta., Grand Forks, N.D. *1936*
McNeill, Clarence E., Univ. of Nebraska, Lincoln, Neb. *1919*
McPherson, William H., 99 S. Cedar St., Oberlin, Ohio. *1923*
McVey, Frank L., Univ. of Kentucky, Lexington, Ky. *1895*
Mead, Edward S., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1934*
Means, Gardiner C., R. R. 1, Box 43, Vienna, Va. *1926*
Mears, Eliot G., Grad. School of Bus., Stanford University, Calif. *1917*
Meehan, M. Joseph, U. S. Dept. of Com., Bur. of For. and Dom. Com., Washington, D.C. *1940*
Meek, Gertrude P., 707 Tuscan Ave., P.O. Box 710, Hattiesburg, Miss. *1931*
Meek, Howard B., Cornell Univ., Ithaca, N.Y. *1929*
Meek, Wilbur T., 822 S. 67th St., Omaha, Neb. *1938*
Meeker, Royal, 625 Whitney Ave., New Haven, Conn. *1903*
Mehl, Paul, Commodity Exchange Admin., 332 S. La Salle St., Room 1036, Chicago, Ill. *1919*
Melcher, William, 1873 Glencoe Rd., Winter Park, Fla. *1934*
Melder, Frederick E., Clark Univ., Dept. of Econ. and Soc., Worcester, Mass. *1934*
Mendieta, Francisco A., 977 E. 37th St., Brooklyn, N.Y. *1939*
Merchant, Ely O., 122 E. 42nd St., Room 3816, New York, N.Y. *1910*
Meredith, Lewis D., Nat. Life Ins. Co., Montpelier, Vt. *1929*
Merhoff, Richard H., 1355 W. 31st St., Chicago, Ill. *1940*
Meriam, Richard S., Harvard Bus. School, Soldiers Field, Boston, Mass. *1914*
Merrill, Ezra, 500 Rutherford Ave., Boston, Mass. *1938*
Metzger, Charles R., Asso. of Motion Picture Producers, Inc., 5504 Hollywood Blvd., Hollywood, Calif. *1929*
Meyer, Balthasar H., 3327 P St., N.W., Washington, D.C. *1889*
Meyer, Carl, 231 S. La Salle St., Chicago, Ill. *1918*
***Meyer,** Eugene, Jr., 1624 Crescent Pl., Washington, D.C. *1910*
Meyers, Albert L., Apt. 242, Arlington Village, Arlington, Va. *1930*
Meyrowitz, Alvin, 731 W. 183rd St., New York, N.Y. *1940*
Michels, Rudolf K., 18 Vanderbilt Rd., Scarsdale, N.Y. *1929*
Micoleau, Henri L., General Motors Corp., 1775 Broadway, New York, N.Y. *1935*
Mighell, Albert T., 2747 N. 55th St., Milwaukee, Wis. *1925*

Mikesell, Raymond F., Univ. of Washington, Col. of Econ. and Bus., Seattle, Wash. *1936*

Mikkelsen, Michael A., R.R. 2, Danbury, Conn. *1910*

Mikoljon, Stanley J., 182 Columbia Ave., Passaic, N.J. *1933*

Milam, Paul W., Univ. of Arkansas, Col. of Bus. Admin., Fayetteville, Ark. *1940*

Miles, J. Royce, 1012 Jackson, Monroe, La. *1940*

Miller, Adolph C., 2230 S St., N.W., Washington, D.C. *1901*

Miller, Benjamin O., Virginia Poly. Inst., Blacksburg, Va. *1938*

Miller, Edmund T., Univ. Sta., Austin, Tex. *1909*

Miller, Edward T., Jr., 617 Wilson Dr., Albion, Mich. *1937*

Miller, Glenn W., Univ. of Toledo, Toledo, Ohio. *1936*

Miller, Henry S., 57 Charles St., New York, N.Y. *1936*

Miller, J. Don, Jr., 619 9th St., Columbus, Ind. *1940*

Miller, John L., 24 Grand Ave., Madison, Wis. *1939*

Miller, John P., 203 Sheffield Hall, New Haven, Conn. *1936*

Miller, John W., Montgomery Ward and Co., Chicago, Ill. *1939*

Miller, Paul L., 2414 Ridge Rd. Dr., Alexandria, Va. *1924*

Miller, Sidney L., Univ. of Iowa, Col. of Com., Iowa City, Iowa. *1920*

Miller, Stanley L., 736 W. End Ave., New York, N.Y. *1939*

Miller, Taulman A., 507 S. Highland Ave., Bloomington, Ind. *1936*

Millikan, Max F., 1285 Boulevard, Apt. 46, New Haven, Conn. *1937*

Millis, Harry A., Univ. of Chicago, Faculty Exchange, Chicago, Ill. *1895*

Mills, Frederick C., Columbia Univ., New York, N.Y. *1920*

Mills, Mark C., Indiana Univ., Dept. of Econ., Bloomington, Ind. *1923*

Miner, Edward G., Pfaudler Co., Rochester, N.Y. *1914*

Minor, Milton C., Farmers Nat. Bank, Danville, Ky. *1930*

Mints, Lloyd W., Univ. of Chicago, Box 237 Faculty Exchange, Chicago, Ill. *1922*

Mirkowich, Nicholas, Univ. of California, Dept. of Econ., Berkeley, Calif. *1940*

Mises, Ludwig, 3, av. Dumas, Geneva, Switzerland. *1924*

Mitch, George F., 511 E. Hamilton Ave., State College, Pa. *1926*

Mitchell, Agnes W., 240 E. End Ave., Beaver, Pa. *1934*

Mitchell, Broadus, Occidental Col., Los Angeles, Calif. *1921*

Mitchell, George S., 3838 Dittman Rd., Arlington, Va. *1931*

Mitchell, George W., 5453 Woodlawn Ave., Chicago, Ill. *1930*

Mitchell, Harry A., Tulane Univ., New Orleans, La. *1933*

Mitchell, Hugh C., Jr., 3038 Newark St., N.W., Washington, D.C. *1932*

Mitchell, James M., 70 Oakland Pl., Buffalo, N.Y. *1914*

Mitchell, Waldo F., 1508 N. 7th St., Terre Haute, Ind. *1920*

***Mitchell,** Wesley C., 161 W. 12th St., New York, N.Y. *1903*

Mittelman, Edward B., 2032 Belmont Rd., N.W., Washington, D.C. *1920*

Modlin, George M., University of Richmond, Va. *1940*

Moe, Floyd B., Virginia Junior Col., Virginia, Minn. *1935*

Moffat, James E., 925 E. Hunter Ave., Bloomington, Ind. *1915*

Mogilnitsky, Theodosi A., Loyola Univ., 6525 Sheridan Rd., Chicago, Ill. *1935*

Moloney, John F., Nat. Cottonseed Products Asso., 19[illegible] Sterick Bldg., Memphis, Tenn. *1938*

Monchow, Helen C., 337 E. Chicago Ave., Chicago, Ill. *1929*

Monrad, Oscar, Chamber of Com., 152 Temple St., New Haven, Conn. *1939*

Monroe, Arthur E., D21 Kirkland House, Cambridge, Mass. *1915*

Monroe, Day, Bur. of Home Econ., Washington, D.C. *1926*

Montague, Gilbert H., 152 E. 37th St., New York, N.Y. *1926*

Montgomery, R. H., Univ. of Texas, Austin, Tex. *1939*

Montgomery, Royal E., Cornell Univ., Dept. of Econ., Ithaca, N.Y. *1931*

Moonitz, Maurice, Univ. of Santa Clara, Col. of Bus. Admin., Santa Clara, Calif. *1935*

Moore, Charles W., Glen Rd., Wellesley Farms, Mass. *1939*

Moore, Floyd W., Western State Teachers Col., Kalamazoo, Mich. *1927*

Moore, Henry L., Cornwall, N.Y. *1896*

Moore, Justin H., Col. of City of New York, 17 Lexington Ave., New York, N.Y. *1920*

Moore, W. J., Richmond, Ky. *1934*

Moore, William H., 1701 Massachusetts Ave., N.W., Washington, D.C. *1934*

Moorhouse, Llewellyn A., State Agric. Col., Fort Collins, Colo. *1922*

Morehouse, Edward W., 101 Ely Pl., Madison, Wis. *1925*

Morgan, Charles S., 5721 Chevy Chase Pkwy., Washington, D.C. *1917*

Morgan, George A., Room 1649, 122 S. Michigan Ave., Chicago, Ill. *1940*

Morgan, Gerald, Hyde Park, N.Y. *1920*

***Morgan,** John P., 23 Wall St., New York, N.Y. *1913*

Morgan, Julian D., 411 W. Nevada, Urbana, Ill. *1938*

Morgan, Lorne T., Univ. of Toronto, Dept. of Polit. Sci., Toronto 5, Ont., Canada. *1932*

Morgan, Ora S., Columbia Univ., School of Bus., New York, N.Y. *1933*

Moriarty, John S., 111 U. S. Customhouse, San Francisco, Calif. *1938*

Morrill, Chester, Fed. Res. Bd., Washington, D.C. *1924*

Morris, Bruce R., 40 S. Wade, Washington, Pa. *1935*

Morris, Homer L., Plush Mill Rd., Wallingford, Pa. *1933*

Morris, Maxwell H., 460 E. 15th Ave., Eugene, Ore. *1938*

Morris, Victor P., Univ. of Oregon, Col. of Soc. Sci., Eugene, Ore. *1926*

Morris, Walter S., 732 14th Ave., Patterson, N.J. *1939*

Morrison, Jay, 1221 Third Ave., W., Seattle, Wash. *1935*

Morrison, Loyle A., 1616 S. Lynn St., Arlington, Va. *1923*

Morrison, Paul L., 2115 Central Park Ave., Evanston, Ill. *1928*

Morrison, Vernon G., 182 Oak Rd., Box 174, Norris, Tenn. *1936*

Morrow, Curtis H., 3 West Ct., Waterville, Me. *1922*

Morse, Herbert C., 531 W. 122nd St., Apt. A-11, New York, N.Y. *1940*

Morse, Hermann C., 1335 W. Hollywood Ave., Chicago, Ill. *1929*

Morson, William T., Box 13, Atlantic Beach, N.Y. *1937*

***Morss,** John W., Room 618, 201 Devonshire St., Boston, 9, Mass. *1909*

Morss, Noel, 568 South St., Needham, Mass. *1933*

Mortenson, William P., Univ. of Wisconsin, Dept. of Agric. Econ., Madison, Wis. *1935*

Morton, Joseph E., Knox Col., Dept. of Econ., Galesburg, Ill. *1936*

Morton, Walter A., Univ. of Wisconsin, Sterling Hall, Madison, Wis. *1928*

Mosak, Jacob L., Univ. of Chicago, Dept. of Econ., Chicago, Ill. *1940*

Mosk, Sanford A., Univ. of California, Dept. of Econ., Berkeley, Calif. *1936*

Moulton, Harold G., Brookings Inst., 722 Jackson Pl., Washington, D.C. *1911*

Mowbray, Albert H., Univ. of California, 119 South Hall, Berkeley, Calif. *1924*

Mucha, Frank A., F.H.A., New P. O. Bldg., Los Angeles, Calif. *1940*

Mudge, Edmund W., 1000 Morewood Ave., Pittsburgh, Pa. *1934*

Mudgett, Bruce D., Univ. of Minnesota, Minneapolis, Minn. *1918*

Mueller, Frederick W., Jr., DePaul Univ., School of Com., 64 E. Lake St., Chicago, Ill. *1935*

Mulliken, Otis E., 3726 Connecticut Ave., Washington, D.C. *1939*

Mund, Vernon A., Univ. of Washington, Dept. of Econ., Seattle, Wash. *1929*

Muntz, Earl E., New York Univ., School of Com., Washington Sq., New York, N.Y. *1923*

Murchison, Claudius T., Cotton-Textile Inst., 320 Broadway, New York, N.Y. *1928*

Murdoch, Arthur E., 115 Evans Ave., Alamo Heights, San Antonio, Tex. *1911*

Murphy, Henry, U. S. Treasury Dept., Div. of Res. and Statis., Washington, D.C. *1926*

Murphy, Mary E., 106 Morningside Dr., New York, N.Y. *1935*

Murray, Evan B., Utah State Agric. Col., School of Com., Logan, Utah. *1940*

Murray, Merrill G., 6607 Delfield St., Chevy Chase, Md. *1933*

Murray, William G., Iowa State Col., Dept. of Agric. Econ., Ames, Iowa. *1927*

Musgrave, Richard A., 117 Fresh Pond Pkwy., Cambridge, Mass. *1937*

Myers, A. Howard, 294 Washington St., Boston, Mass. *1931*

Myers, Charles A., Box 98, Framingham, Mass. *1936*

Myers, Howard B., 426 S. Lee St., Alexandria, Va. *1927*

Myers, Robert J., U. S. Dept. of Labor, Children's Bur., Washington, D.C. *1934*

Myers, Walter R., Univ. of Minnesota, 103 School of Bus., Minneapolis, Minn. *1922*

Nadler, Marcus, New York Univ., 90 Trinity Pl., New York, N.Y. *1924*

Nahl, Perham C., Oklahoma A. and M. Col., School of Com., Stillwater, Okla. *1936*

Nathan, Otto, 132 W. 11th St., New York, N.Y. *1931*

Nathan, Robert R., U. S. Dept. of Com., Bur. of For. and Dom. Com., Div. of Econ., Washington, D.C. *1937*

Nathanson, Nathan L., 1000 Montgomery St., Brooklyn, N.Y. *1940*

Nef, John U., Univ. of Chicago, Chicago, Ill. *1929*

Neff, Frank A., Univ. of Wichita, Wichita, Kan. *1935*

Neifeld, Morris R., 15 Washington St., Newark, N.J. *1924*

Neisser, Hans P., 227 Kenyon Ave., Swarthmore, Pa. *1933*
Neiswanger, William A., Jr., Univ. of Illinois, Dept. of Econ., Urbana, Ill. *1924*
Nelson, Alf W., U. S. Maritime Com., Div. of Res., Washington, D. C. *1937*
Nelson, Carl L., Kansas State Col., Dept. of Econ., Manhattan, Kan. *1934*
Nelson, Edward G., Stanford University, Calif. *1938*
Nelson, El Roy, Univ. of Denver, Denver, Colo. *1935*
Nelson, James C., The Warwick, Apt. 201, 3051 Idaho Ave., N.W., Washington, D.C. *1936*
Nelson, Peter, A. and M. Col., Stillwater, Okla. *1929*
Nelson, Richard W., U. S. Forest Service, Forest Taxation Inquiry, Washington, D.C. *1922*
Nelson, Saul, U. S. Dept. of Labor, Bur. of Labor Statis., Washington, D.C. *1939*
Nerlove, Samuel H., Univ. of Chicago, School of Com., Chicago, Ill. *1923*
Newbury, Frank D., Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa. *1937*
Newcomer, Mabel, Vassar Col., Poughkeepsie, N.Y. *1915*
Newlove, George H., Univ. of Texas, School of Bus. Admin., Austin, Tex. *1914*
Newman, Clarence W., 111 N. 5th St., Richmond, Va. *1931*
Newman, William H., Univ. of Pennsylvania, Wharton School, Philadelphia, Pa. *1939*
Newton, James Q., P.O. Box 1559, Denver, Colo. *1933*
Nichol, Archibald J., Univ. of California, Berkeley, Calif. *1935*
Nicholls, William D., Univ. of Kentucky, Col. of Agric., Lexington, Ky. *1929*
Nicholson, Charles M., 17 Montrose Ave., Garrett Park, Md. *1929*
Niehaus, Fred R., Univ. of Colorado, School of Bus., Boulder, Colo. *1935*
Nielander, William A., Box 1568, Univ. of Texas, Austin, Tex. *1939*
Nielsen, Axel, Vilhelm Smidts Vej 7, Gentofte, Denmark. *1929*
Nielsen, Oswald, 101 Jackson Ave., Univ. Pk., Hyattsville, Md. *1929*
Nightingale, Edmund A., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1936*
Nilsson, Arthur E., 166 S. Cedar St., Oberlin, Ohio. *1927*
Nixon, Russell A., 30 Landon St., Cambridge, Mass. *1940*
Noble, Clarence V., Univ. of Florida, Agric. Exper. Sta., Gainesville, Fla. *1919*
Noetzel, Arthur J., 2015 Orrington Ave., Evanston, Ill. *1940*
Noetzel, Grover A. J., Temple Univ., Dept. of Econ., Philadelphia, Pa. *1934*
Nolen, Russell M., Univ. of Illinois, Urbana, Ill. *1931*
Nordstrom, Oscar L., Augustana Col., Rock Island, Ill. *1937*
Norman, Charles B., Col. of the Pacific, Stockton, Calif. *1938*
Normano, John F., 148 Elgin St., Newton Centre, Mass. *1931*
Norris, Nilan, 2800 University Ave., New York, N.Y. *1936*
Nortman, P. Bernard, 230 W. 107th St., New York, N.Y. *1938*
Norton, John D., 104 Scotland Rd., South Orange, N.J. *1939*
Norton, Thomas L., Univ. of Buffalo, Crosby Hall, Buffalo, N.Y. *1925*
Nourse, Edwin G., Brookings Inst., 722 Jackson Pl., Washington, D.C. *1911*
Noyes, C. Reinold, 455 E. 51st St., New York, N.Y. *1930*
Noyes, Guy E., 2710 Yale Sta., New Haven, Conn. *1935*
Nugent, Rolf, Russell Sage Found., 130 E. 22nd St., New York, N.Y. *1936*
Nulsen, Robert H., 9910 Robbins Dr., Beverly Hills, Calif. *1938*
Nunn, William L., Univ. of Newark, Newark, N.J. *1937*
Nussbaum, Hans, 1142 49th St., Brooklyn, N.Y. *1939*
Nystrom, Paul H., Columbia Univ., School of Bus., New York, N.Y. *1924*

Oakes, Eugene E., 421 Whitney Ave., New Haven, Conn. *1931*
Oakley, Cyrus K., 615 Ida Ave., Fayetteville, Ark. *1937*
Obana, Tsutomu, Japanese Chamber of Com., 549 Market St., San Francisco, Calif. *1924*
O'Connell, Donald W., Columbia Univ., 920 Hartley Hall, New York, N.Y. *1940*
O'Connor, J. Michael, 1731 Eye St., N.W., Washington, D.C. *1934*
O'Connor, Walter J., 4728 46th St., N.W., Washington, D.C. *1937*
O'Donnell, Al F., Marlyn Apts., Cathedral Ave. at 39th St., Washington, D.C. *1937*
O'Donnell, Cyril, 64 E. Lake St., Chicago, Ill. *1929*
Oehler, Christian, 660 Glen Ave., Westfield, N.J. *1935*
Ogburn, William F., Univ. of Chicago, Chicago, Ill. *1911*
O'Grady, John, 1317 F St., N.W., Washington, D.C. *1916*
Ohlin, Bertil G., Handelshogskolan, Stockholm, Sweden. *1937*

Ohsol, Johann G., 1815 Riverside Dr., New York, N.Y. *1913*
O'Leary, Joseph M., 15 Chesbrough Rd., West Roxbury, Mass. *1937*
O'Leary, Paul M., 37 Barton Pl., Ithaca, N.Y. *1929*
Oliver, Clifton, Jr., 1911 Oleander, Apt. 2, Baton Rouge, La. *1940*
Oliver, E. L., 5361 Conduit Rd., N.W., Washington, D.C. *1928*
Oliver, Henry M., Jr., 2843 Yale Sta., New Haven, Conn. *1938*
O'Loughlin, William, 264 Henry St., New York, N.Y. *1939*
Olsen, Herluf V., Dartmouth Col., Tuck School, Hanover, N.H. *1924*
Olsen, Nils A., Equitable Life Assurance Society, 393 7th Ave., New York, N.Y. *1930*
Olson, Albert L., 749 12th Ave., Huntington, W.Va. *1937*
Olson, Emery E., 3551 University Ave., Los Angeles, Calif. *1922*
Olson, Oscar A., 1301 E. Euclid St., McPherson, Kan. *1940*
Omohundro, Edgar H., 455 Delafield Pl., N.W., Washington, D.C. *1940*
O'Neil, Leo D., Commonwealth at Granby St., Boston, Mass. *1939*
O'Neill, Harry J., St. Louis Univ., School of Com. and Fin., St. Louis, Mo. *1928*
Oosterhous, Lawrence A., State Teachers Col., Dept. of Econ., Oshkosh, Wis. *1940*
Opie, Redvers, British Embassy, Washington, D.C. *1926*
Orchard, John E., Columbia Univ., School of Bus., New York, N.Y. *1940*
Ormes, Ferguson R., Wabash Col., Crawfordsville, Ind. *1940*
Ortega, Virgilio, P.O. Box 812, Havana, Cuba. *1932*
Orten, Maurice D., Univ. of Missouri, School of Mines and Metallurgy, Rolla, Mo. *1924*
Orton, William A., 53 Harrison Ave., Northampton, Mass. *1922*
Osborn, William C., 20 Exchange Pl., New York, N.Y. *1910*
Osborne, Ernest L., Biarritz Apts., 121 Ward Pkwy., Kansas City, Mo. *1934*
Osgood, Roy C., First National Bank, 38 S. Dearborn St., Chicago, Ill. *1904*
O'Shea, Vincent J., 260 Arleigh Rd., Douglas Manor, L.I., N.Y. *1932*
Osias, Max S., 373 N. Glebe Rd., Arlington, Va. *1940*
Ostlund, Harry J., Univ. of Minnesota, School of Bus., Minneapolis, Minn. *1920*
Ostrolenk, Bernhard, Col. of City of New York, 17 Lexington Ave., New York, N.Y. *1940*
Otto, Erich A., 431 Grand Ave., Leonia, N.J. *1931*
Owen, William V., Purdue Univ., Dept. of Hist., Econ., and Gov., Lafayette, Ind. *1939*
Owens, Richard N., George Washington Univ., Washington, D.C. *1923*

Pabst, William R., Jr., Tulane Univ., Dept. of Econ., New Orleans, La. *1932*
Packard, Richard M., 143 Park Dr., Boston, Mass. *1936*
Pagani, John, Jr., Univ. of Santa Clara, Santa Clara, Calif. *1939*
Page, Anne (Mrs.), Chocorua, N.H. *1936*
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Palmer, Dwight L., Massachusetts Inst. of Tech., Dept. of Econ. and Soc. Sci., Cambridge, Mass. *1940*
Palmer, Edgar Z., Univ. of Kentucky, Col. of Com., Lexington, Ky. *1927*
Palmer, Gladys L., Univ. of Pennsylvania, 3440 Walnut St., Philadelphia, Pa. *1920*
Palmer, Walter S., Jr., 201 State St., Reno, Nev. *1934*
Palmer, William B., Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. *1934*
Palyi, Melchior, 211 W. Wacker Dr., Chicago, Ill. *1927*
Pancoast, Elinor, Goucher Col., Baltimore, Md. *1923*
Paris, James D., 83 Old Pond Rd., Great Neck, N.Y. *1935*
Parker, Barrington D., Dillard Univ., New Orleans, La. *1939*
Parker, James S., 2326 S. 15th St., Sheboygan, Wis. *1936*
Parmelee, Julius H., Bur. of Railway Econ., Washington, D.C. *1917*
Parmelee, Rexford C., 4700 47th St., N.W., Washington, D.C. *1931*
Parrish, John B., Southern Illinois State Normal Univ., Dept. of Econ., Carbondale, Ill. *1937*
Parrott, D'Arcy, 1 Wall St., New York, N.Y. *1940*
§**Parry,** Carl E., Fed. Res. Bd., Div. of Security Loans, Washington, D.C. *1910*
Parry, Corliss L., Marvin Ridge Rd., New Canaan, Conn. *1935*
Parsons, Kenneth H., Univ. of Wisconsin, 304 Agric. Hall, Madison, Wis. *1937*
Parsons, Oswand A., Montana State Col., Agric. Exper. Sta., Bozeman, Mont. *1939*
Paschal, Elizabeth, Apt. 201, 2627 Lee Highway, Arlington, Va. *1934*
Pasel, Lawrence, 3 College St., Canton, N.Y. *1924*
Pasvolsky, Leo, U.S. Dept. of State, Washington, D.C. *1939*
Paton, William A., 2023 Day St., Ann Arbor, Mich. *1917*

Patterson, Ernest M., Univ. of Pennsylvania, Philadelphia, Pa. *1912*

Patterson, Grace F., 404 S. 47th St., Philadelphia, Pa. *1934*

Patterson, John H., Middlebury Col., Middlebury, Vt. *1935*

Patterson, S. Howard, Univ. of Pennsylvania, Logan Hall, Philadelphia, Pa. *1921*

Pattillo, Nathan A., Jr., Men's Dormitory, Canton, N.Y. *1929*

Patton, Francis L., Hamilton Col., Clinton, N.Y. *1920*

Patton, Harald S., Michigan State Col., Dept. of Econ., East Lansing, Mich. *1923*

Patton, Robert D., Ohio State Univ., Columbus, Ohio. *1927*

Paustian, Paul W., Stephens Col., Columbia, Mo. *1929*

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Pearce, C. A., 2700 Que St., N.W., Washington, D.C. *1933*

Pearson, Frank A., Cornell Univ., Ithaca, N.Y. *1924*

Peck, Gustav, 6807 Oak Lane, Chevy Chase, Md. *1932*

Peck, Harvey W., 305 Comstock Ave., Syracuse, N.Y. *1922*

Peck, Millard, U. S. Dept. of Agric., 613 Terminal Bldg., Lincoln, Neb. *1940*

Pegrum, Dudley F., Univ. of California, Los Angeles, Calif. *1928*

Peirce, Paul S., 139 Morgan St., Oberlin, Ohio. *1910*

Peisch, Archie M., Norwich, Vt. *1919*

Peixotto, Jessica B., 2728 Claremont Blvd., Berkeley, Calif. *1909*

Pelz, Edward J., 18 Mount Joy Ave., Scarsdale, N.Y. *1938*

Percefull, Sabin C., Northeastern Junior Col., Miami, Okla. *1921*

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Person, Harlow S., Southlawn Ave., Dobbs Ferry, N.Y. *1901*

Person, Walter A., Forest City, Iowa. *1940*

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Peter, Raymond J., 137 Roseville Ave., Newark, N.J. *1940*

Peters, Iva L. (Mrs.), Fishkill, N.Y. *1922*

Petersen, Elmore, Univ. of Colorado, Univ. Exten. Div., Boulder, Colo. *1930*

Peterson, Florence, Bur. of Labor Statis., Washington, D.C. *1934*

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Peterson, G. Shorey, Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. *1924*

Peterson, J. Marvin, Miami Univ., Oxford, Ohio. *1932*

Peterson, Mary S. (Mrs.), 304 Princeton Ave., Madison, Wis. *1920*

Peterson, Rudolph, 129 S. 13th St., Lewisburg, Pa. *1925*

Pettee, James C., Univ. of Kansas, School of Bus., Lawrence, Kan. *1936*

Pettengill, Robert B., Univ. of Southern California, Dept. of Econ., Los Angeles, Calif. *1934*

Pettet, Zellmer R., Bur. of the Census, Div. of Agric., Washington, D.C. *1940*

Phelps, Clyde W., Univ. of Chattanooga, Chattanooga, Tenn. *1927*

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Phillips, William J., Jr., Clarkson Col. of Tech., Potsdam, N.Y. *1938*

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Pillion, Joseph C., Miami Univ., Oxford, Ohio. *1937*

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Pitt, Courtnay H., 405 Lexington Ave., New York, N.Y. *1936*
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Plum, Lester V., 48 Vandeventer St., Princeton, N.J. *1940*
Plumley, Alden J., Univ. of Nevada, Dept. of Econ., Reno, Nev. *1928*
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Pogue, Joseph E., 18 Pine St., New York, N.Y. *1924*
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Poindexter, Carl, Carson Newman Col., Jefferson City, Tenn. *1939*
Poindexter, William G., Jr., 409 River Rd., Greenwood, Miss. *1937*
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Pond, Addison, Univ. of Vermont, Burlington, Vt. *1939*
Poole, Kenyon E., Brown Univ., Dept. of Econ., Providence, R.I. *1937*
Potter, Helen, Western Col., Dept. of Soc. Sci., Oxford, Ohio. *1938*
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Preston, Stanley W., Box 3415, University, La. *1933*
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Price, H. Bruce, Univ. of Kentucky, Dept. of Markets and Rur. Fin., Lexington, Ky. *1918*
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Pruefer, Clifford H., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1939*
Puckett, Erastus P., Central Col., Fayette, Mo. *1935*
Purdy, Harry L., Dartmouth Col., Hanover, N.H. *1939*
Pyle, Hugh G., Pennsylvania State Col., Exten. Services, State College, Pa. *1931*
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Pymm, J. Donald, Fresno State Col., Fresno, Calif. *1939*

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Ranck, Samuel H., Grand Rapids Pub. Lib., Grand Rapids, Mich. *1906*
Randall, Ernest F., 2715 Cortland Pl., Washington, D.C. *1937*
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Rankin, John O., Steele, Mo. *1937*
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Raver, Paul J., 811 N. E. Oregon St., Portland, Ore. *1933*
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Reddick, Olive I., Hood Col., Frederick, Md. *1930*
Redlich, Fritz L., Mercer Univ., Macon, Ga. *1937*
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Reedy, Theodore W., 222 N. Thomas St., Arlington, Va. *1940*
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Reid, Margaret G., Iowa State Col., Ames, Iowa. *1932*
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Remer, Charles F., Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. *1923*
Renne, Roland R., Montana State Col., Bozeman, Mont. *1931*
Reynolds, Lloyd G., Johns Hopkins Univ., Dept. of Polit. Econ., Baltimore, Md. *1937*
Rhodes, Edward E., 300 Broadway, Newark, N.J. *1923*
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Rich, Chester L., Cornell Col., Mt. Vernon, Iowa. *1937*
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Richards, Howard E., Star Route, Allentown, Pa. *1940*
Richards, Leo J., P.O. Box 465, Benjamin Franklin Sta., Washington, D.C. *1928*
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Ricketts, Faye M., Univ. of Wichita, Wichita, Kan. *1938*
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Riddle, N. Gilbert, Ohio State Univ., Col. of Com., Columbus, Ohio. *1925*
Riefler, Winfield W., Inst. for Advanced Study, School of Econ. and Pol., Princeton, N.J. *1937*
Riegel, John W., Univ. of Michigan, 103 Tappan Hall, Ann Arbor, Mich. *1936*
Riegel, Robert, Univ. of Buffalo, Bur. of Bus. and Soc. Res., Buffalo, N.Y. *1918*
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Riley, H. E., 1249 N. Utah St., Arlington, Va. *1934*
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Ritchie, Fred, DePauw Univ., Dept. of Econ., Greencastle, Ind. *1936*
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Robb, William C., Univ. of Illinois, Col. of Com., Urbana, Ill. *1937*
Robbins, Edwin C., 115 Parker St., Newton Centre, Mass. *1912*
Robbins, Laurence B., 50 S. LaSalle St., Chicago, Ill. *1934*
Roberts, Christopher, 65 N. Fullerton Ave., Montclair, N.J. *1929*
Roberts, David R., 33 Winnemay St., Natick, Mass. *1938*
Roberts, George B., Nat. City Bank of New York, New York, N.Y. *1932*
Roberts, Harold S., 1349 Kenyon St., N.W., Washington, D.C. *1937*
Roberts, Hazel V., 526 W. 113th St., New York, N.Y. *1925*
Roberts, James C., Firestone Tire and Rubber Co., Akron, Ohio. *1938*
‡**Robertson,** D. H., London School of Economics, Houghton St., London, W.C.2, England. *1938*
Robey, Ralph W., Columbia Univ., New York, N.Y. *1927*
Robinson, Frederick B., Col. of City of New York, 139th St. and Convent Ave., New York, N.Y. *1909*
Robinson, Leland R., 40 Exchange Pl., New York, N.Y. *1916*

Robinson, Maurice H., Pine Orchard, Conn. *1899*
Robinson, Myles E., 2017 Fairmont Ave., Columbus, Ohio. *1937*
Robinson, Thomas H., Colgate Univ., Hamilton, N.Y. *1933*
Robotka, Frank, Iowa State Col., Ames, Iowa. *1923*
Rockafellow, Robert, Rhode Island State Col., Kingston, R.I. *1935*
Rodkey, Robert G., Univ. of Michigan, School of Bus. Admin., Ann Arbor, Mich. *1919*
Roe, Frederick, 135 S. La Salle St., Chicago, Ill. *1932*
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Rogers, Herbert O., U. S. Dept. of Labor, Bur. of Labor Statis., Washington, D.C. *1928*
Rogoff, Esther, Hunter Col., 2 Park Ave., New York, N.Y. *1938*
Roloff, Walter E., 1806 Arapahoe St., Golden, Colo. *1930*
Rolph, John G., Amalgamated Bank of New York, 11–15 Union Sq., New York, N.Y. *1940*
Ronk, Samuel E., 310 State St., Springfield, Mass. *1940*
Röpke, Wilhelm, 56 Quai Gustave Ador, Geneva, Switzerland. *1927*
Rorem, C. Rufus, American Hospital Asso., 18 E. Division St., Chicago, Ill. *1927*
Rose, Douglas H., Maryland Life Ins. Co., 10 South St., Baltimore, Md. *1924*
Rose, Dwight C., 90 Broad St., New York, N.Y. *1930*
Rose, James V., 9617 Baltic Rd., Cleveland, Ohio. *1938*
Rose, Joseph R., 5466 Montgomery Ave., Philadelphia, Pa. *1934*
Rosenberg, Samuel, 321 Washington St., Hoboken, N.J. *1939*
Rosenfield, Myron, Div. of State Planning, 333 Broadway, Albany, N.Y. *1940*
Rosenthal, Irving, 50 Union Sq., New York, N.Y. *1939*
***Rosenthal,** Lessing, 105 W. Monroe St., Chicago, Ill. *1891*
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Rosewater, Victor, 1530 Locust St., Philadelphia, Pa. *1892*
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Ross, Emerson, 4611 Davidson Dr., Chevy Chase, Md. *1939*
Ross, Harry A., Borden Co., Bur. of Econ., 350 Madison Ave., New York, N.Y. *1921*
Ross, James A., Jr., Syracuse Univ., School of Citizenship and Public Affairs, Syracuse, N.Y. *1926*
Ross, Maurice O., Butler Univ., Indianapolis, Ind. *1933*
Ross, Murray, 1280 Ocean Ave., Brooklyn, N.Y. *1936*
Ross, Samuel B., Carnegie Inst. of Tech., Schenley Park, Pittsburgh, Pa. *1937*
Ross, Thurston H., Univ. of Southern California, Bur. of Bus. Res., Los Angeles, Calif. *1936*
Ross, W. Andrew, Dept. of Econ., Stanford University, Calif. *1938*
Rossell, Robert T., 747 Union Arcade, Pittsburgh, Pa. *1921*
Rossetti, Victor H., Farmers and Merchants Nat. Bank, Los Angeles, Calif. *1912*
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Rowe, Harold B., 722 Jackson Pl., Washington, D.C. *1939*
Rowe, Kenneth W., 1145 St. Paul St., Denver, Colo. *1936*
Rowe, William H., Bur. of Agric. Econ., Div. of Agric. Fin., Washington, D.C. *1935*
Rowland, James P., Chestnut Hill Col., Dept. of Econ., Philadelphia, Pa. *1939*
Rowlands, David T., Univ. of Pennsylvania, 211 Logan Hall, Philadelphia, Pa. *1933*
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Ruggles, Clyde O., Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. *1911*
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Rukeyser, Merryle S., 80 Pryer Ter., New Rochelle, N.Y. *1931*
Runge, Edmond J., 151 81st St., Brooklyn, N.Y. *1940*
Rusby, Paul, Middlebury Col., Middlebury, Vt. *1936*
Rushmore, David B., c/o Evans, Stillman, Room 1901, 14 Wall St., New York, N.Y. *1937*
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Russell, Lewine H. (Mrs.), Haverford Gables, Apt. 4A, Haverford, Pa. *1934*
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Russell, Warren L., 9424 220th St., Queens Village, L.I., N.Y. *1928*

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Sasuly, Max, Soc. Sec. Bd., Office of the Actuary, Washington, D.C. *1938*

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Sauvain, Harry C., 505 N. Park Ave., Bloomington, Ind. *1934*

Sawwaf, Husni A., American Univ. of Beirut, Beirut, Syria. *1938*

Saxon, Olin G., Sheffield Hall, New Haven, Conn. *1939*

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Schaper, William A., Univ. of Oklahoma, Norman, Okla. *1926*

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Shaw, Albert, Hastings-on-Hudson, N.Y. *1886*
Shaw, Alejandro E., Charcas 682, Buenos Aires, Argentina, South America. *1933*
Shaw, Ernest R., 20 Exchange Pl., New York, N.Y. *1922*
Shaw, Fayette B., 64 E. Lake St., Room 1400, Chicago, Ill. *1940*
Shaw, Harry F. R., 204 Tuck Hall, Hanover, N.H. *1925*
Shaw, William H., 1819 Broadway, Room 1022, New York, N.Y. *1940*
Shea, J. Whitney, Houghton Col., Houghton, N.Y. *1938*
Shearer, Warren W., Wabash Col., Crawfordsville, Ind. *1940*
Shearman, Henry P., Miami Univ., Oxford, Ohio. *1933*
Sheehan, John H., 1137 E. Corby Blvd., South Bend, Ind. *1939*
Shelton, Henry W., Box 48, LaJolla, Calif. *1916*
Shelton, W. Arthur, 3211 Tennyson St., N.W., Washington, D.C. *1919*
Shepard, Earl F., 1214 Washtenaw Ave., Ann Arbor, Mich. *1940*
Shepherd, Geoffrey S., Iowa State Col., Dept. of Agric. Econ., Ames, Iowa. *1931*
Shepherd, Henry L., 93 Elm St., Hartford, Conn. *1935*
Sheppard, Ernest J., 217 W. Lutz St., West Lafayette, Ind. *1926*
Sherman, William R., Hillsdale Col., Hillsdale, Mich. *1923*
Sherrington, Charles E. R., Railway Res. Serv., 4 Cowley St., Westminster, London S.W.1, England. *1923*
Shields, D. Murray, Irving Trust Co., 1 Wall St., New York, N.Y. *1925*
Shields, George W., 634 Starks Bldg., Louisville, Ky. *1940*
Shields, Harald G., Univ. of Chicago, School of Bus., Chicago, Ill. *1937*
Shields, Thomas K., 7 S. 12 E., Salt Lake City, Utah. *1940*
Shilland, Peter D., Univ. of Illinois, Com. Bldg., Urbana, Ill. *1939*

Shishkin, Boris B., 901 Massachusetts Ave., N.W., Washington, D.C. *1938*
Shiskin, Julius, 875 Boulevard E., Weehawken, N.J. *1937*
Shlakman, Vera, Queens Col., Flushing, N.Y. *1938*
Shoemaker, James H., Brown Univ., Dept. of Econ., Providence, R.I. *1931*
Shore, Mary L., 1960 Georgia Ave., Winston-Salem, N.C. *1937*
Shors, William F., Bryant Col., Providence, R.I. *1938*
Shortliffe, J. Melbourne, 35 Payne St., Hamilton, N.Y. *1925*
Shoup, Carl S., Columbia Univ., School of Bus., New York, N.Y. *1925*
Shriver, George M., B. and O. Railroad Co., Baltimore, Md. *1911*
Shultz, William J., Col. of City of New York, School of Bus. and Civic Admin., 17 Lexington Ave., New York, N.Y. *1940*
Shuman, Ronald B., Univ. of Oklahoma, Col. of Bus. Admin., Norman, Okla. *1929*
Sidlo, Thomas L., 1956 Union Trust Bldg., Cleveland, Ohio. *1922*
Siegel, Seymour N., 302 W. 86th St., New York, N.Y. *1940*
Sienkiewicz, C. A., 925 Chestnut St., Philadelphia, Pa. *1936*
Sigsbee, Ray A., 145 Ames Ave., Leonia, N.J. *1936*
Sikes, Earl R., Dartmouth Col., Hanover, N.H. *1925*
Silberling, Norman J., Deckeroak Bldg., Palo Alto, Calif. *1915*
Silverstein, Nathan L., Indiana Univ., School of Bus. Admin., Bloomington, Ind. *1928*
Silverstrand, Clarence F., 2114 N St., N.W., Apt. 26, Washington, D.C. *1937*
Simkhovitch, Vladimir G., Columbia Univ., New York, N.Y. *1901*
Simmons, Carroll D., Univ. of Texas, Austin, Tex. *1927*
Simmons, Edward C., Univ. of Michigan, Dept. of Econ., Ann Arbor, Mich. *1936*
Simon, Leon G., 225 W. 34th St., New York, N.Y. *1935*
Simon, S. Fanny, 1020 Gerard Ave., New York, N.Y. *1935*
Simons, Algie M., 2319 Sherman Ave., Evanston, Ill. *1925*
Simons, Henry C., Jr., Univ. of Chicago, Chicago, Ill. *1929*
Simpson, Floyd R. O., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1933*
Simpson, Herbert D., Northwestern Univ., School of Com., Wieboldt Hall, Chicago, Ill. *1932*
Simpson, Paul, Univ. of Delaware, Dept. of Econ., Newark, Del. *1940*
Sims, Lewis B., Bur. of the Census, Div. of State and Local Gov., Washington, D.C. *1938*
Sinsabaugh, Robert W., Clarke, Sinsabaugh and Co., Chrysler Bldg., New York, N.Y. *1932*
Skinner, Macy M., Univ. of Washington, 210 Com. Hall, Seattle, Wash. *1921*
Slade, Helen, 15 W. 55th St., New York, N.Y. *1923*
Slater, J. E., Coverdale and Colpitts, 120 Wall St., New York, N.Y. *1925*
Slaughter, Charles B., 277 Park Ave., New York, N.Y. *1940*
Slavetinsky, Franz M., Spring Hill Col., Spring Hill, Ala. *1939*
Slesinger, Reuben E., 5419 Northumberland St., Pittsburgh, Pa. *1937*
Slichter, Sumner H., Harvard Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. *1920*
Slusser, E. K., 1804 W. Congress St., Chicago, Ill. *1939*
Small, Joseph T., Paine Webber and Co., 25 Board St., New York, N.Y. *1936*
Smart, L. Edwin, 410 King Ave., Columbus, Ohio. *1923*
Smelser, David P., Procter and Gamble Co., Cincinnati, Ohio. *1925*
Smith, Arthur A., Southern Methodist Univ., Dallas, Tex. *1939*
Smith, Bradford B., 7 Heathcote Rd., Scarsdale, N.Y. *1924*
Smith, Carl D., Babson Inst., Babson Park, Mass. *1935*
Smith, Charles W., Park Ave., Halethorpe P.O., Baltimore, Md. *1936*
Smith, Dan T., 204 Morgan Hall, Soldiers Field, Boston, Mass. *1928*
Smith, E. Dillon, Civil Aeronautics Authority, Accounts and Analyses, Washington, D.C. *1935*
Smith, Earl L., 535 Beacon St., Boston, Mass. *1939*
Smith, Edward L., 260 Convent Ave., New York, N.Y. *1925*
Smith, Elliott D., 90 High St., New Haven, Conn. *1938*
Smith, Elmer A., 135 E. 11th Pl., Chicago, Ill. *1937*
Smith, Everett G., Univ. of Texas, Austin, Tex. *1933*
Smith, Frank P., Univ. of Rochester, Rochester, N.Y. *1932*
Smith, Harry W., Univ. of New Hampshire, Dept. of Econ., Durham, N.H. *1924*
Smith, Hartley L., 148 Cassidy Pl., New Brighton, S.I., N.Y. *1921*
Smith, Helen H., Apt. E4, 254 Seaman Ave., New York, N.Y. *1936*

***Smith,** Jacob G., 602 Crossett St., Syracuse, N.Y. *1903*
Smith, James G., 80 Murray Pl., Princeton, N.J. *1922*
Smith, John J., 1112 N. 31st St., Birmingham, Ala. *1939*
Smith, Joseph E., Youngstown Col., Youngstown, Ohio. *1927*
Smith, Lawrence, 88 Leighton Rd., Wellesley, Mass. *1923*
Smith, Lucius, Fayetteville State Teachers Col., Fayetteville, N.C. *1934*
Smith, Mark A., U. S. Tariff Com., 7th and E Sts., N.W., Washington, D.C. *1912*
Smith, Nelson L., Hopkinton, N.H. *1924*
Smith, Newlin R., Univ. of Buffalo, Buffalo, N.Y. *1934*
Smith, Pierre R., Elyria Savings Bldg., Elyria, Ohio. *1930*
Smith, R. Elberton, Univ. of Denver, Denver, Colo. *1939*
Smith, Richard R., 120 E. 39th St., New York, N.Y. *1922*
Smith, Robert S., 681 College Sta., Durham, N.C. *1935*
Smith, Roy J., Univ. of California at Los Angeles, Div. of Agric. Econ., Los Angeles, Calif. *1939*
Smith, Victor E., Northwestern Univ., 307 Harris Hall, Evanston, Ill. *1937*
Smith, Walter B., 128 Main St., Williamstown, Mass. *1925*
Smith, Wendell R., 209 Univ. Hall, Iowa City, Iowa. *1940*
Smola, Frank A., 2501 57th Ave., Cicero, Ill. *1933*
Smolinski, Harold J., Box 2186, University, La. *1940*
Smyth, William H., "Fernwald," Berkeley, Calif. *1914*
Smythe, Limen T., Iowa State Col., Dept. of Econ., Ames, Iowa. *1940*
Snavely, Tipton R., Monroe Hill, University, Va. *1918*
Snider, Joseph L., Grad. School of Bus. Admin., Soldiers Field, Boston, Mass. *1918*
Snider, Robert G., 401 Marlborough Rd., Yonkers, N.Y. *1935*
Sniffen, Clarence E., Dairymen's League Cooperative Assoc., 11 W. 42nd St., New York, N.Y. *1931*
Snoy, Baron Jean C., Chateau de Bois Seigneur Isaac, Belgium. *1929*
Snyder, Carl, 33 Liberty St., New York, N.Y. *1920*
Snyder, Harry R., McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. *1937*
Snyder, Ivan V., 607 Electric Bldg., Indianapolis, Ind. *1937*
Sogge, Tillman M., Soc. Sec. Bd., Bur. of Res. and Statis., Washington, D.C. *1937*
Soldinger, Morris A., 619 E. Pabst St., Ironwood, Mich. *1935*
Sollenberger, Issac J., Univ. of Oklahoma, Faculty Exchange, Norman, Okla. *1926*
Solterer, Josef, East Falls Church, Va. *1932*
‡**Sombart,** Werner, Humboldstr. 35a, Berlin-Grunewald, Germany. *1929*
Somers, Herman M., 2633 Connecticut Ave., N.W., Washington, D.C. *1940*
Somers, Richard H., Watervliet Arsenal, Watervliet, N.Y. *1931*
Sommaripa, George G., 68 Dudley St., Brookline, Mass. *1930*
Sorrell, Vernon G., 229 N. Dartmouth, Albuquerque, N.M. *1926*
Soudek, Josef, 900 W. End Ave., New York, N.Y. *1939*
Southard, Frank A., Jr., Cornell Univ., Dept. of Econ., Ithaca, N.Y. *1927*
Southworth, Constant, U. S. Dept. of State, Washington, D.C. *1938*
Southworth, Shirley D., Col. of William and Mary, Williamsburg, Va. *1921*
Spafford, William F., Conway Ct., Troy, N.Y. *1925*
Spahr, Walter E., 8 Michigan Rd., Bellerose, L.I., N.Y. *1920*
Spalding, Merrill T., Box 556, Palo Alto, Calif. *1934*
Spang, Kenneth M., 311 St. Ronan's St., New Haven, Conn. *1937*
Spangler, Clifford D., Box 1124, Sta. A, Lincoln, Neb. *1929*
Sparkman, Reuben H., 130-B Senate Office Bldg., Washington, D. C. *1931*
Sparks, Earle S., Univ. of South Dakota, Vermillion, S.D. *1923*
Sparks, Frank H., 1220 Cortez Dr., Glendale, Calif. *1936*
Spencer, Francis A., 722 Jackson Pl., N.W., Washington, D.C. *1939*
Spencer, Myron J., 812 Mitchell Ave., Cincinnati, Ohio. *1940*
Spengler, Edwin H., 114-28 177th St., St. Albans, L.I., N.Y. *1928*
Spengler, Joseph J., Duke Univ., Durham, N.C. *1928*
Spero, Herbert, Col. of City of New York, 17 Lexington Ave., New York, N.Y. *1940*
Spiegel, Henry W., Duquesne Univ., 331 4th Ave., Pittsburgh, Pa. *1938*
Spielmans, John V., Franklin Park Hotel, 1332 Eye St., N.W., Washington, D.C. *1936*
‡**Spiethoff,** Arthur A. C., Univ. of Bonn, Bonn, Germany. *1932*
Sprague, Albert A., 1130 Lake Shore Dr., Chicago, Ill. *1934*

Sprague, Oliver M. W., Harvard Bus. School, Morgan Hall, Boston, Mass. *1900*
Spriegel, William R., Northwestern Univ., School of Com., Evanston, Ill. *1937*
Springer, John Y., Box 4124, Duke Sta., Durham, N.C. *1937*
Spurr, William A., Univ. of Nebraska, Col. of Bus. Admin., Lincoln, Neb. *1938*
Spurrier, Leo, Huron Col., Huron, S.D. *1925*
Stadthagen, Heinz A., Univ. of Illinois, 319 Com. Bldg., Urbana, Ill. *1939*
Staebler, Neil, 424 S. Main, Ann Arbor, Mich. *1933*
Staley, A. Eugene, Fletcher School of Law and Diplomacy, Medford, Mass. *1928*
Stalson, J. Owen, Harvard School of Bus., Soldiers Field, Boston, Mass. *1935*
Stapp, Peyton, 1200 Sacramento St., San Francisco, Calif. *1936*
Stark, Walter R., Loomis, Sayles and Co., Inc., 140 Federal St., Boston, Mass. *1920*
Starkweather, Louis P., 935 Oakwood Pl., Plainfield, N.J. *1934*
Starnes, George T., University, Va. *1924*
Staudinger, Hans W., 66 W. 12th St., New York, N.Y. *1936*
Stebbins, Lucy W., 2731 Durant Ave., Berkeley, Calif. *1920*
Stecker, Margaret L., 1703 New York Ave., N.W., Washington, D.C. *1917*
Stehman, J. Warren, Univ. of Minnesota, Minneapolis, Minn. *1916*
Stein, Emanuel, New York Univ., Washington Square Col., New York, N.Y. *1931*
Stein, Harold, 4574 Kings Highway, Brooklyn, N.Y. *1929*
Steiner, George A., Indiana Univ., Bur. of Bus. Res., Bloomington, Ind. *1939*
Steiner, William H., 325 Riverside Dr., Apt. 121, New York, N.Y. *1916*
Stephan, Audley H. F., 201 Rosemont Ave., Trenton, N.J. *1934*
Stephan, Frederick F., American Statistical Asso., 1626 K St., N.W., Washington, D.C. *1935*
Stephens, George A., 3518 Northampton St., N.W., Washington, D.C. *1912*
Stephens, George W., Washington Univ., St. Louis, Mo. *1910*
Stern, Alfred W., 615 Crescent Ct., Highland Park, Ill. *1920*
Stern, Boris, U. S. Dept. of Labor, Bur. of Labor Statis, Washington, D.C. *1929*
Sterns, Worthy P., 1833 Lamont St., Washington, D.C. *1901*
Stevens, Richard T., Ohio State Univ., Econ. Dept., Columbus, Ohio. *1934*
Stevens, W. Mackenzie, Univ. of Maryland, College Park, Md. *1926*
Stevenson, Louis T., 60 E. 42nd St., New York, N.Y. *1935*
Stevenson, Robert C., Univ. of Idaho, Southern Branch, Pocatello, Idaho. *1934*
Stevenson, Russell A., Univ. of Minnesota, Minneapolis, Minn. *1927*
Stewart, Bryce M., 2015 R.K.O. Bldg., 1270 6th Ave., New York, N.Y. *1921*
Stewart, John L., 6036 Daniel Rd., N.W., Washington, D.C. *1925*
Stewart, Paul W., Anderson, Nichols Associates, Inc., 330 W. 42nd St., New York, N.Y. *1931*
Stewart, W. Blair, 4512 Windom Pl., N.W., Washington, D.C. *1930*
Steyne, Alan N., American Embassy, London, England. *1937*
Stiefel, Carl F., 150 Scotland Rd., South Orange, N.J. *1917*
Stigler, George J., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1940*
Stiles, Lynn A., 919 Reba Pl., Evanston, Ill. *1937*
Stimson, Claude W., Knox Col., Dept. of Econ., Galesburg, Ill. *1929*
Stinebower, Leroy D., Room 362, U. S. Dept. of State, Washington, D.C. *1933*
Stinneford, Claude L., Earlham Col., Earlham, Ind. *1928*
Stites, Sara H., Simmons Col., Boston, Mass. *1912*
Stitt, Louise, U. S. Dept. of Labor, Women's Bur., Washington, D.C. *1925*
Stockder, Archibald H., Columbia Univ., School of Bus., New York, N.Y. *1925*
Stocking, Collis A., 2505 Wilson Ave., Jefferson Pk., Alexandria, Va. *1927*
Stocking, George W., Univ. of Texas, Dept. of Econ., Austin, Tex. *1923*
Stockton, Frank T., Univ. of Kansas, Lawrence, Kan. *1910*
Stockton, John R., Univ. Sta., Austin, Tex. *1940*
Stockwell, Marvel M., 405 Hilgard Ave., Los Angeles, Calif. *1922*
Stokes, Milton L., 36 College Ave., Annville, Pa. *1934*
Stolper, Gustav, 52 Wall St., New York, N.Y. *1940*
Stone, Edward, Wardman Park Hotel, Washington, D.C. *1937*
Stone, Nahum I., 414 W. 118th St., New York, N.Y. *1899*
Stone, Raleigh W., Univ. of Chicago, Chicago, Ill. *1920*
Stout, C. Frederick C., John R. Evans and Co., 337 Arch St., Philadelphia, Pa. *1917*
Stradley, Leighton P., 1907 Packard Bldg., Philadelphia, Pa. *1934*
Stratton, H. John, Illinois Col., Jacksonville, Ill. *1928*
Stratton, Samuel S., Harvard Bus. School, Morgan Hall, Soldiers Field, Boston, Mass. *1928*

Straus, Percy S., R. H. Macy and Co., Herald Sq., New York, N.Y. *1916*
Strayer, Paul J., Princeton Univ., Dept. of Econ., Princeton, N.J. *1935*
Streeter, Thomas W., Sussex Ave., Morristown, N.J. *1912*
Stricker, Adam K., Jr., General Motors Corp., 1775 Broadway, New York, N.Y. *1938*
Strickland, Maurice A., North Carolina State Col., Econ. Dept., Raleigh, N.C. *1939*
Strong, Earl D., Grinnell Col., Grinnell, Iowa. *1922*
Strong, Gordon B., 5600 Aylesboro, Squirrel Hill, Pittsburgh, Pa. *1937*
Strong, Wendell M., 29 Hillcrest Rd., Glen Ridge, N.J. *1918*
Stroock, Sol M., 61 Broadway, New York, N.Y. *1909*
Struve, Louis W., 609 Academy St., Newark, Del. *1938*
Studenski, Paul, 21 E. 10th St., New York, N.Y. *1930*
Subercaseaux, Guillermo, Calle Merced 152, Santiago, Chile, South America. *1913*
Sublette, Myrick H., Col. of St. Teresa, Winona, Minn. *1930*
Suffern, Arthur E., 297 4th Ave., New York, N.Y. *1930*
Sufrin, Sidney C., Ohio State Univ., Dept. of Econ., Columbus, Ohio. *1935*
Sulkin, Lorraine L. (Mrs. S. Edward), 5535 Waterman Ave., St. Louis, Mo. *1939*
Sullivan, Rodman, Univ. of Kentucky, Col. of Com., Lexington, Ky. *1930*
Summerhays, Benjamin J., 9441 Wilshire Blvd., Beverly Hills, Calif. *1939*
Sumner, John D., Univ. of Buffalo, Buffalo, N.Y. *1928*
Sundelson, J. Wilner, 444 Central Park W., New York, N.Y. *1931*
Surface, Frank M., 1 W. 72nd St., New York, N.Y. *1923*
Surveyer, Arthur, Suite 1201, Dominion Sq. Bldg., Montreal, Que., Canada. *1936*
Sutherland, Edward G., Univ. of Nevada, Box 9055, Reno, Nev. *1923*
Sutton, Glenn W., Univ. of Georgia, School of Com., Athens, Ga. *1937*
Sutton, Harold G., George Washington Univ., Dept. of Econ., Washington, D.C. *1923*
Swanish, Peter T., 6527 Glenwood Ave., Chicago, Ill. *1933*
Swanson, Arthur E., 2310 Central Park Ave., Evanston, Ill. *1915*
Swanson, Ernst W., Washington State Col., Pullman, Wash. *1940*
Swanton, Walter F., 513 School St., Houma, La. *1938*
Swayzee, Cleon O., Univ. of Nebraska, Col. of Bus. Admin., Lincoln, Neb. *1933*
Sweeney, Stephen, 25 Roselawn Ave., Lansdowne, Pa. *1931*
Sweet, Homer N., 80 Federal St., Boston, Mass. *1919*
Sweet, John L., 415 Fullerton Pkwy., Apt. 1401-A, Chicago, Ill. *1936*
Sweezy, Maxine Y. (Mrs.), 10 Forest St., Cambridge, Mass. *1936*
Sweney, Lowry, Lowry Sweeney, Inc., 17 S. High St., Columbus, Ohio. *1933*
§**Swift,** Harold H., Union Stock Yards, Chicago, Ill. *1924*

Taeusch, Carl F., U. S. Dept. of Agric., Room 3756 South Bldg., Washington, D.C. *1929*
Taft, Philip, 154 Irving Ave., Providence, R.I. *1937*
Taggart, Joseph H., Univ. of Kansas, School of Bus., Lawrence, Kan. *1930*
Tamagna, Frank M., Xavier Univ., Cincinnati, Ohio. *1940*
Tandy, W. Lou, Eureka Col., Eureka, Ill. *1932*
Tanenbaum, Jerome, 525 Broadway, New York, N.Y. *1917*
Tannenbaum, Frank, Columbia Univ., Dept. of Hist., New York, N.Y. *1925*
Tarshis, Lorie, 65 Langdon St., Cambridge, Mass. *1937*
Tator, Samuel W., Junior Col. of Com., 389 Whitney Ave., New Haven, Conn. *1918*
Taussig, Charles W., American Molasses Co. of New York, 120 Wall St., New York, N.Y. *1933*
Taussig, Frank W., Harvard Univ., Cambridge, Mass. *1887*
Taylor, Albion G., Col. of William and Mary, Williamsburg, Va. *1928*
Taylor, Amos E., Bur. of For. and Dom. Com., Fin. Div., Washington, D. C. *1917*
Taylor, Archibald W., 143 Stanmore Pl., Westfield, N.J. *1916*
Taylor, Carl D., 85 S. Lake Ave., Albany, N.Y. *1920*
Taylor, Edward F., 114–28 179th St., St. Albans, L.I., N.Y. *1924*
Taylor, George R., R.R. 2, Amherst, Mass. *1922*
Taylor, George W., Univ. of Pennsylvania, 3440 Walnut St., Philadelphia, Pa. *1934*
Taylor, Glen S., 2703 Key Blvd., Arlington, Va. *1940*
Taylor, Henry C., Farm Found., 606 S. Michigan Ave., Chicago, Ill. *1903*
Taylor, Horace, Columbia Univ., Hamilton Hall, New York, N.Y. *1924*
Taylor, Kenneth W., Wartime Prices and Trade Bd., Ottawa, Ont., Canada. *1923*
Taylor, Paul S., 119 South Hall, Berkeley, Calif. *1921*

Taylor, Philip E., Trinity Col., Hartford, Conn. *1934*
Taylor, W. Bayard, Univ. of Wisconsin, School of Com., Madison, Wis. *1923*
Taylor, Wayne C., 2414 Tracy Pl., Washington, D.C. *1934*
Taylor, William H., Univ. of Pennsylvania, 114 Logan Hall, Philadelphia, Pa. *1935*
Tead, Ordway, Harper and Bros., 49 E. 33rd St., New York, N.Y. *1922*
Teaf, Howard M., Jr., 207 W. Plumstead Ave., Lansdowne, Pa. *1935*
Tebbutt, Arthur R., Brown Univ., Dept. of Econ., Providence, R.I. *1939*
Temby, J. L., 321 N. Level St., Dodgeville, Wis. *1925*
Temple, Alan H., Nat. City Bank, New York, N.Y. *1939*
Tener, Kinley J., Sewickley, Pa. *1921*
Teper, Lazare, Ladies' Garment Workers' Union, 3 W. 16th St., New York, N.Y. *1938*
Terborgh, George W., 4542 N. 26th St., Arlington, Va. *1928*
Tereshtenko, Valery J., 601 W. 149th St., Apt. 2, New York, N.Y. *1934*
Terpenning, Walter A., Albion Col., Albion, Mich. *1938*
Thelen, Max, 136 Alvarado Rd., Berkeley, Calif. *1935*
Theobald, Adrian D., 1366 N. Dearborn Pkwy., Chicago, Ill. *1938*
Theodorides, Angelos, Univ. of Toledo, Toledo, Ohio. *1940*
Thomas, George, Univ. of Utah, Salt Lake City, Utah. *1917*
Thomas, Raymond D., Oklahoma A. and M. Col., School of Com., Stillwater, Okla. *1921*
Thomas, Rollin G., 610 Dodge St., Lafayette, Ind. *1928*
Thomas, Roscoe L., P.O. Box 612, Butte, Mont. *1917*
Thomas, Woodlief, 26 E. Bradley Lane, Chevy Chase, Md. *1924*
Thompson, C. Seymour, Univ. of Pennsylvania Lib., Philadelphia, Pa. *1933*
Thompson, Charles D., Mt. Hermon School, Mt. Hermon, Mass. *1931*
Thompson, Charles M., Univ. of Illinois, Col. of Com., Urbana, Ill. *1913*
Thompson, John G., 1319 E. Capitol St., Washington, D.C. *1908*
Thompson, Nina, 56 E. 87th St., New York, N.Y. *1940*
Thompson, Samuel H., Iowa State Col., Ames, Iowa. *1923*
Thompson, William D., 526 Main St., Racine, Wis. *1918*
Thomson, Dorothy L. (Mrs.), 100 Pelham Rd., New Rochelle, N.Y. *1927*
Thornborough, William G., Jr., Warnock, Ohio. *1939*
Thorne, Alison C. (Mrs. D. W.), c/o D. W. Thorne, Utah State Col., Agronomy Dept., Logan, Utah. *1937*
Thorp, Willard L., 404 Riverside Dr., New York, N.Y. *1920*
Thresher, Brainerd A., Massachusetts Inst. of Tech., Cambridge, Mass. *1929*
Thurston, Mather F., Grange Manor Apt. A-8, 1419 W. Grange Ave., Philadelphia, Pa. *1937*
Tibbits, George D., University Club, 16th St., N.W., Washington, D.C. *1938*
Tillotson, Loyal G., Bradley Poly. Inst., Peoria, Ill. *1927*
Tilton, Cecil G., Univ. of Connecticut, Storrs, Conn. *1929*
Timoshenko, Vladimir P., Food Res. Inst., Stanford University, Calif. *1934*
Tinley, James M., Giannini Found., Univ. of California, Berkeley, Calif. *1938*
Tippets, Charles S., Univ. of Pittsburgh, School of Bus. Admin., Pittsburgh, Pa. *1920*
Titsworth, Henry H., Queensboro Hotel, Glens Falls, N.Y. *1937*
Titus, Paul M., Kenyon Col., Gambier, Ohio. *1928*
Todd, Arthur J., 602 Lake St., Evanston, Ill. *1921*
Todd, Edwin S., 302 E. High St., Springfield, Ohio. *1907*
Tollefson, Roy M., Ashby, Minn. *1938*
Tolles, Newman A., U. S. Dept. of Labor, Wage and Hour Div., Washington, D.C. *1938*
Tolley, Howard R., U. S. Dept. of Agric., Room 3095, South Bldg., Washington, D.C. *1924*
Topkis, Bernard H., U. S. Bur. of Labor Statis., Washington, D.C. *1939*
Torgerson, Harold W., Northwestern Univ., School of Com., Evanston, Ill. *1934*
Tosdal, Harry R., 530 Morgan Hall, Soldiers Field, Boston, Mass. *1914*
Tostlebe, Alvin S., 839 Forest Dr., Wooster, Ohio. *1923*
Tough, Rosalind, 5 Prospect Pl., Tudor City, 2129, New York, N.Y. *1938*
Tousley, Rayburn D., 728 Clark St., Apt. 208, Evanston, Ill. *1938*
Tow, Clarence W., Univ. of Minnesota, School of Bus. Admin., Minneapolis, Minn. *1936*
Tower, Ralph B., Mt. Union Col., Alliance, Ohio. *1925*
Towle, Lawrence W., 845 E. Washington St., Appleton, Wis. *1932*
Towles, John K., Chase National Bank, Pine St. corner of Nassau, New York, N.Y. *1910*
Towne, Ezra T., Univ. of North Dakota, Grand Forks, N.D. *1905*
Towner, Rutherford H., 60 John St., New York, N.Y. *1904*

Towsley, Frank H., 195 Broadway, New York, N.Y. *1940*

Trafton, George H., 143-15 38th Ave., Flushing, N.Y. *1926*

Trant, James B., University, La. *1923*

Travers, Frank J., Lincoln Nat. Life Ins. Co., Fort Wayne, Ind. *1939*

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Trefftzs, Kenneth L., Carnegie Inst. of Tech., Dept. of Econ., Schenley Park, Pittsburgh, Pa. *1939*

Trent, William J., Jr., 2115 2nd St., N.W., Apt. 1, Washington, D.C. *1937*

Treuenfels, Rudolf L., Room 2408, 420 Lexington Ave., New York, N.Y. *1939*

Trezise, Philip H., 804 Monroe, Ann Arbor, Mich. *1939*

Tripp, L. Reed, Lehigh Univ., Dept. of Econ., Bethlehem, Pa. *1935*

Troxel, C. Emery, Wayne Univ., Dept. of Econ., Detroit, Mich. *1936*

Troxell, John P., 11 W. 42nd St., New York, N.Y. *1929*

Trueblood, Lorman C., 72 Foster St., Cambridge, Mass. *1939*

Truesdell, Leon E., 3429 Ordway St., N.W., Washington, D.C. *1920*

Truitt, Gray, Hofstra Col., Hempstead, L.I., N.Y. *1939*

Trumbower, Henry R., Univ. of Wisconsin, Madison, Wis. *1905*

Tryon, Frederick G., Nat. Bituminous Coal Com., Market Statis. Unit, Washington, D.C. *1920*

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Tucker, Donald S., Massachusetts Inst. of Tech., Cambridge, Mass. *1912*

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Tuckerman, Gustavus, Jr., New York Univ., Univ. Col., Univ. Heights, Bronx, New York, N.Y. *1934*

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Turner, Robert C., Wayne Univ., Dept. of Econ., Detroit, Mich. *1935*

Turney, Merle C., Carnegie Inst. of Tech., Pittsburgh, Pa. *1935*

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Tuttle, Frank W., Univ. of Florida, Col. of Bus. Admin., Gainesville, Fla. *1922*

Tuttle, Pierson M., 25 Nassau St., New York, N.Y. *1915*

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Tyson, Francis, Univ. of Pittsburgh, Pittsburgh, Pa. *1918*

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Ullian, Frieda S., 35 Dolphin Rd., Newton, Mass. *1938*

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Ulmer, Carl D., Koppers Co., Res. Dept., Koppers Bldg., Room 926, Pittsburgh, Pa. *1926*

Ulmer, Melville J., 973 E. 26th St., Brooklyn, N.Y. *1940*

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Underhill, H. Fabian, Univ. of Illinois, Dept. of Econ., Urbana, Ill. *1936*

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Unstad, Lyder K. L., Alma Col., Alma, Mich. *1934*

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Vacek, Jaroslav, Czechoslovak Export Inst., Prague VII, Bohemia. *1929*

Vail, Robert P., Montgomery Pl., Decatur, Ill. *1940*

Vaile, Roland S., Univ. of Minnesota, Minneapolis, Minn. *1924*

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Valgren, Victor N., 2947 Macomb St., N.W., Washington, D.C. *1910*

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Vanderblue, Homer B., 2629 Stewart Ave., Evanston, Ill. *1911*

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Van Kirk, Jay C., Tulane Univ., Col. of Com., New Orleans, La. *1937*
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Van Metre, Ralph M., Breckinridge Hall, Danville, Ky. *1931*
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Van Pelt, Henry W., 82 Gillett St., Hartford, Conn. *1927*
Van Sant, Edward R., Box 524, State College, Pa. *1930*
Van Sickle, John V., 1478 Clairmont Pl., Nashville, Tenn. *1924*
Van Toor, J. E., Farrar and Rinehart, Inc., 232 Madison Ave., New York, N.Y. *1933*
Van Winkle, Edward H., Rensselaer Poly. Inst., Troy, N.Y. *1935*
Varley, Dimitry V., 41 Grove St., New York, N.Y. *1940*
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Venstrom, Cruz, Univ. of Nevada, Reno, Nev. *1931*
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Viets, Marion, Adelphi Col., Garden City, L.I., N.Y. *1934*
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Walker, Dilworth, Univ. of Utah, Salt Lake City, Utah. *1937*
Walker, Francis, Fed. Trade Com., Washington, D.C. *1895*
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Walker, Q. Forrest, R. H. Macy and Co., Executive Offices, New York, N.Y. *1937*
Wall, Alexander, 1503 Philadelphia Nat. Bank Bldg., Philadelphia, Pa. *1934*
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Waltersdorf, Maurice C., 417 Locust Ave., Washington, Pa. *1925*
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Waters, R. Hadly, Pennsylvania State Col., State College, Pa. *1938*

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Watson, James D., 1013 S. Esther St., South Bend, Ind. *1933*

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Weber, Orlando F., 61 Broadway, New York, N.Y. *1937*

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Welden, William C., Farm Credit Admin., Co-op. Res. and Serv. Div., Washington, D.C. *1939*

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Wells, Charles C., T. E. Joiner and Co., 135 S. La Salle St., Chicago, Ill. *1937*

Wells, Herman B, Indiana Univ., Bloomington, Ind. *1930*
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Wentworth, Edna C. (Mrs.), Washington Univ., Dept. of Econ., St. Louis, Mo. *1934*
Wentworth, Edward N., Armour's Livestock Bur., Chicago, Ill. *1924*
Wenzlick, Roy, 915 Olive St., St. Louis, Mo. *1938*
Wermel, Michael T., Brooklyn Col., Bedford Ave. and Ave. H, Brooklyn, N.Y. *1936*
Wermuth, Robert P., 6428 Magnolia Ave., Chicago, Ill. *1940*
Wernette, J. Philip, Harvard Bus. School, Boston, Mass. *1927*
Werntz, William W., 22 E. Woodbine St., Chevy Chase, Md. *1930*
West, C. H., Box 152, Sunol, Calif. *1926*
West, Miriam E., New Jersey Col. for Women, New Brunswick, N.J. *1927*
West, Robert J., Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa. *1936*
Westerfield, Ray B., Drawer 94a Yale Sta., New Haven, Conn. *1912*
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Whalen, Oren L., 208 W. Washington, Urbana, Ill. *1925*
Whaley, Otis, Henderson State Teachers Col., Dept. of Econ. and Bus. Admin., Arkadelphia, Ark. *1938*
Wheeler, Bayard O., Oregon State Col., Dept. of Econ., Corvallis, Ore. *1937*
Wheeler, Oliver P., Fed. Res. Bank of San Francisco, Div. of Res., San Francisco, Calif. *1937*
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Whitaker, Albert C., Stanford University, Calif. *1902*
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White, Charles P., Univ. of Tennessee, School of Com., Knoxville, Tenn. *1924*
White, Horace G., Jr., New York Univ., Dept. of Econ., Washington Sq., New York, N.Y. *1935*
White, Wilford L., Apt. 110-A, Westchester Apts., 3900 Cathedral Ave., Washington, D.C. *1922*
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Whitman, Roswell H., R. H. Macy and Co., Office of Controller, New York, N.Y. *1934*
Whitney, Nathaniel R., Glendale, Ohio. *1911*
Whitney, Simon N., 44 E. 82nd St., New York, N.Y. *1927*
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Williams, Faith M., U. S. Dept. of Labor, Bur. of Labor Statis., Washington, D.C. *1925*
Williams, John B., 30 Lowell Rd., Wellesley Hills, Mass. *1939*
Williams, John H., Harvard Univ., Cambridge, Mass. *1919*
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Williams, Roger H., 40 Wall St., New York, N.Y. *1913*
Williamson, Harold F., 105 Clifford St., Hamden, Conn. *1935*
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Willis, John B., 215 Prospect Ave., New Brighton, S.I., N.Y. *1933*
Willits, Joseph H., Rockefeller Found., 49 W. 49th St., New York, N.Y. *1919*
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Wilson, Arnold J., Westclox, La Salle, Ill. *1935*
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Winton, Hildreth T., 120 Soundview Ave., Mamaroneck, N.Y. *1932*
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Wolfe, French E., Procter and Gamble Co., Econ. Res. Dept., Cincinnati, Ohio. *1912*
Wolfe, Thomas M., 201 Masonic Bldg., Athens, Ohio. *1929*
Wolff, Reinhold P., 535 5th Ave., New York, N.Y. *1938*
Wolfson, Theresa, 810 E. 19th St., Brooklyn, N.Y. *1930*
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Woods, Sam E., Commercial Attache (Berlin), U. S. Dept. of State, Washington, D.C. *1934*
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Zwicky, Frederick J., Hessisch-Oldendorf, b/Hameln/Weser, Germany. *1937*

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Dempsey, B. W.
Dept. of Labor and Industries Lib., Div. of Statis.
Di Venuti, B.
Doherty, R. P.
Donaldson, M. H.
Donham, W. B.
Doriot, G. F.
Ebersole, J. F.
Elliston, H. B.
Filene, L.
Folts, F. E.
Friedberg, M.
Gragg, C. I.
Gras, N. S. B.
Gruener, J. R.
Hamilton, R. S.
Hanson, A. W.
Healy, J. J.
Hersey, M. L.
Hosmer, W. A.
Hower, R. M.
Hubbard, J. B.
Larson, H. M.
Learned, E. P.
Lewis, H. T.
Lingham, C. H.
Locke, H. D.
Massachusetts State Lib., State House
Masson, R. L.
McDonough, C. A.
Meriam, R. S.
Merrill, E.
Morss, J. W.
Myers, A. H.
O'Neil, L. D.
Packard, R. M.
Ruggles, C. O.
Sanders, T. H.
Schlagenhauf, M. J.
Schmalz, C. N.
Selekman, B. M.
Simmons Col. Lib., 300 The Fenway
Slichter, S. H.
Smith, D. T.
Smith, E. L.

Snider, J. L.
Social Service Lib., 18 Somerset St.
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Stark, W. R.
Stites, S. H.
Stratton, S. S.
Sweet, H. N.
Tosdal, H. R.
Ullman, A.
Wernette, J. P.
Wilson, E. B.

Bradford

Bradford Junior Col., Lib.

Bridgewater

State Teachers Col. Lib.

Brookline

Brown, D. V.
Eaves, L.
Sommaripa, G. G.

Cambridge

Armstrong, F. E.
Baker, G. P.
Bergson, A.
Billings, A. G.
Black, J. D.
Bourne, W. N.
Brown, T. H.
Burbank, H. H.
Butters, J. K.
Canfield, A. J.
Chamberlin, E. H.
Cherington, C. R.
Cole, A. H.
Conant, L.
Crum, W. L.
Cunningham, W. J.
Dalisay, A. M.
Daly, F. S.
Davis, P.
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Enke, S.
Fine, S. M.
Freeman, R. S.
Frickey, E.
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Harris, S. E.
Harvard Univ., Committee on Res. in the Social Sciences, 38–40 Holyoke House
Harvard Univ., Grad. School of Pub. Admin. Lib.
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Harvard Univ., Lib.
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Jackson, D. C.
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Luxton, G.
Maclaurin, W. R.
Mason, E. S.
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Musgrave, R. A.
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Palmer, D. L.
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Taussig, F. W.
Thresher, B. A.
Trueblood, L. C.
Tsuru, S.
Tucker, D. S.
Tuthill, J. W.
Usher, A. P.
Williams, J. H.
Wilson, B. F.
Wilson, E. W.
Winters, R. A.

Charlestown

Calder, P. R.

Chestnut Hill

Foley, E. B.

Edgartown

Jeremiah, J.

Fall River

Fall River Pub. Lib.

Framingham

Keir, J. S.
Myers, C. A.

Hanover

Hunt, B. C.

Haverhill

Haverhill Pub. Lib.

Holyoke

Coombs, P. H.

Lincoln

Bliss, C. A.

Longmeadow

Clark, R. N.
Richard Salter Storrs Lib.

Medford

Halm, G.
Staley, E.

Mt. Hermon

Thompson, C. D.

Natick

Roberts, D. R.

Needham

Morss, N.

New Bedford

Langshaw, W. H.

Newton

Newton Free Lib.
Ullian, F. S.

Newton Centre

McKinley, S. J.
Normano, J. F.
Robbins, E. C.

Newton Highlands

Davis, H. B.
Lake, W. S.

Newtonville

Kobrock, J. P.

Northampton

Douglas, D. W.
Faulkner, H. U.
Forbes Lib.
Lowenthal, E.
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Orton, W. A.
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Willett, E. F.

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Wheaton Col. Lib.

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Quincy

Bowen, L. J., P.O. Box 293

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Dietrich, E. B.
Hewes, A.
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Springfield

Cross, H. W.
Derber, M.
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MacDuffie, J.
Ronk, S. E.
Wellman, H. C.

Tufts College

Manly, L. F.
Shaulis, L. L.
Tufts Col. Lib.

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Estabrook, V. T.

Wakefield

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Comins, H. N.

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Luce, R.

Watertown

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Killough, L. W.
Smith, L.
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Wellesley Farms

Moore, C. W.

Wellesley Hills

Babson, R. W.
Elder, R. F.
Matthews, J. M.
Quirin, E. L.
Williams, J. B.

West Newton

Loomis, R. H.

West Roxbury

O'Leary, J. M.

Williamstown

Fox, B.
McLaren, W. W.
Smith, W. B.
Wallace, D. H.
Williams Col. Lib.

Worcester

Brandenburg, S. J.
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Erickson, R. A.
Gregory, P. M.
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Albion

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Terpenning, W. A.

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Unstad, L. K. L.

Ann Arbor

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Jamison, C. L.
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Paton, W. A.
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Phelps, D. M.
Pub. Lib., E. Huron and N. Thayer St.
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Remer, C. F.
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Rodkey, R. G.
Sharfman, I. L.
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Trezise, P. H.
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Wynne, W. H.

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Court, A. T.
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Detroit Pub. Lib.
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Ekland, L. M.
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Fitzgerald, L. E.
Goodman, G.
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Kirk, L. K.
Levin, S. M.
Long, T. G.
Marygrove Col. Lib., Sister Marie Virginia
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Hagen, E. E.
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Patton, H. S.

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Ranck, S. H.

Highland Park

McGregor Pub. Lib.

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Ironwood

Erickson, A. E.
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Soldinger, M. A.
Soldinger, M. A., Bd. of Educa.

Jackson

Jackson Pub. Lib., 280 W. Michigan Ave.
Junior Col. Lib., Wildwood Ave.

Kalamazoo

Bigelow, H. F.
Bowers, R. S.
Kalamazoo Col., Mandelle Memorial Lib.
Kalamazoo Pub. Lib.
Moore, F. W.
Western State Teachers Col.

Lansing

Michigan State Lib.

Marquette

Howenstine, E. J.
Northern State Teachers Col. Lib.

Mount Pleasant

Central State Teachers Col. Lib.

Muskegon

Hackley Pub. Lib.

Nazareth

Nazareth Col.

Olivet

Olivet Col. Lib.

Port Huron

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Royal Oak

Royal Oak Pub. Lib.

Saginaw

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Michigan State Normal Col.

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Tollefson, R. M.

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State Teachers Col.

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Garver, F. B.
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Heaton, H.
Kozelka, R. L.
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Lunden, L. R.
Marget, A. W.
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Pruefer, C. H.
Reighard, J. J.
Schmidt, E. P.
Setre, K. T.
Simpson, F. R. O.
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Stevenson, R. A.
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Chute, A. H.
Col. of St. Thomas Lib.
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Univ. of Minnesota Lib., Univ. Farm
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Young, F. A.

Virginia

Junior Col. Lib.
Moe, F. B.

Winona

Col. of St. Teresa Lib.
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State Teachers Col. Lib.
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Woods, R. M.

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Greenwood

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Hattiesburg

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Millsaps Col., Carnegie-Millsaps Lib.

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Paustian, P. W.
Scott, DR
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McCollough, E. V.
Tarkio Col. Lib.

University City

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Warrensburg

Anderson, C. J.
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Bozeman

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Renne, R. R.

Butte

Thomas, R. L.

Dillon

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Helena

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Missoula

Ely, R. J. W.
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Chadron

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Grand Island

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Scottsbluff

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Fallon

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Reno

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Davis, W. C.
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Plumley, A. J.
Sutherland, E. G.
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Dankert, C. E.
Dartmouth Col. Lib.
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Funkhouser, R. L.
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Knight, B. W.
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Purdy, H. L.
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Smith, N. L.

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Lutz, H. L.
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Summit

Foster, J. R.

Toms River

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Rider Col., Moore-Gill Lib.
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Hostutler, H.
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Taylor, A. W.
Tucker, R. S.

West Orange

Gourrich, P. P.

Woodbury

Hurff, G. B., Jr.

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Sorrell, V. G.
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Raton

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Gordman, H. S.
Kinsella, T.
Martin, M. E.
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New York State Teachers Assoc., Pub. Inf. Service, 152 Washington Ave.
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Amityville High School Lib.

Annandale-on-Hudson

Bard Col. Lib.

Armonk

Brown, C. C.

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Aurora

Davis, J. S.

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Weld, W. E.
Wells Col. Lib.

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Bellerose, L.I.

Spahr, W. E.

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Latour, C. C.
Sarah Lawrence Col. Lib.

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Anderson, H. A.
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Auerbach, S. J.
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Bornemann, A.
Brooklyn Col. Lib., Bedford Ave. and Ave. H
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McCarthy, P. M.
Mendieta, F. A.
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Ford, C. W.
Leigh, W. W.
Municipal Univ. of Akron, Bierce Lib.
Roberts, J. C.

Alliance

Mt. Union Col. Lib.
Tower, R. B.

Ashland

Ashland Col.

Athens

Armbruster, A. H.
Hellebrandt, E. T.
Ohio Univ. Lib.
Wolfe, T. M.

Bluffton

Bluffton Col. Lib.

Bowling Green

Bowling Green State Col. Lib.
Cooke, G. W.
Helms, L. A.
Manhart, L. F.
Shafer, J. E.

Canton

Canton Pub. Lib.

Cincinnati

Aylstock, E. J.
Bird, F. H.
Bozic, A.
Bursiek, R. C.
Byrne, J. M.
Calhoun, W. P.
Chancellor, W. E.
Cincinnati Pub. Lib.
Dieckmann, A.
Dyer, E.
Egherman, H.
Ellsworth, P. T.
Foreman, C. J.
Freedman, A. M.
Henig, H.
Hewett, W. W.
Hodde, F. H.
Smelser, D. P.
Spencer, M. J.
Tamagna, F. M.
Univ. of Cincinnati Lib., Burnett Woods Pk.
Welsh, L. M.
Wolfe, F. E.
Xavier Univ. Lib., Victory Pkwy.

Cleveland

Arbuthnot, C. C.
Ayres, L. P.
Berger, A. O.
Carlton, F. T.
Cleveland Col. Lib., 167 Public Sq.
Cleveland Pub. Lib., Order Dept., 325 Superior Ave.
Fed. Res. Bank Lib.
Fenn Col. Lib., E. 24th and Euclid
Foster, L. O.
James, A. C.
John Carroll Univ. Lib., Univ. Heights
Johnson, H. H.
McKinnon, C. N.
Rose, J. V.
Russel, A. W.
Sanford, G. W.
Selbert, F. F.
Sidlo, T. L.
Ursuline Col. for Women, 2234 Overlook Rd.
Weisman, R.
Whitsett, J. M.

Cleveland Heights

Hill, D. A.

Columbus

Ackley, G.
Beckman, T. N.
Bitterman, H. J.
Bowers, E. L.
Capital Univ. Lib.
Caplan, B.
Condoide, M. V.
Cordell, H. W.
Dassel, V. H.
Davis, S. W.
Dice, C. A.
Donaldson, E. F.
Duffus, W. M.
Egle, W. P.
Falconer, J. I.
Hayes, H. G.
Held, F. E.
Herbst, A.
Hoagland, H. E.
Huntington, C. C.
James, C. L.
Jucius, M. J.
Kellogg, L. S.
Kibler, T. L.
Kimball, M.
Maynard, H. H.
Ohio State Lib., State Office Bldg.
Ohio State Univ. Lib.
Patton, R. D.
Riddle, N. G.
Robinson, M. E.
Salz, A.
Sapir, M.
Schultz, A. D.
Shaffer, W. B.
Smart, L. E.
Stevens, R. T.
Sufrin, S. C.
Sweney, L.
Walradt, H. F.
Weidler, W. C.
Welsh, E. C.
Wolfe, A. B.
Zorbaugh, G. S. M.

Conneaut

Carnegie Pub. Lib., State St.

Dayton

Dayton Pub. Lib.
Univ. of Dayton, Albert Emanuel Lib.

Delaware
Barnes, G. H.
Hand, G. H.
Keener, J. W.
Ohio Wesleyan Univ. Lib.

Elyria
Smith, P. R.

Fremont
Hayes Memorial Lib., Hayes Ave.

Gambier
Blum, J. W.
Kenyon Col. Lib.
Titus, P. M.

Glendale
Whitney, N. R.

Granville
Denison Univ. Lib.
Dernburg, H. J.
Gordon, L. J.

Hiram
Andress, A. E.
Hiram Col. Lib.

Hudson
Western Reserve Academy Lib.

Kent
Anthony, D. E.
Corey, C. S.
Hudson, H. W.
Kent State Univ. Lib.
Kochenderfer, C. C.

Lakewood
Pub. Lib., 15425 Detroit Ave.

Lima
Lima Pub. Lib.

Manchester
Geeting, R. E.

Marietta
Clark, R. F.

Middletown
Middletown Free Pub. Lib.

New Concord
Heckman, H. W.
Muskingum Col. Lib., Johnson Hall

Niles
Davis, W. Z.

Oberlin
Lewis, B. W.
McPherson, W. H.
Nilsson, A. E.
Oberlin Col. Lib.
Peirce, P. S.
Wooster, H. A.

Oxford
Cawthorn, D. R.
Kelso, H.
Miami Univ. Lib.
Peterson, J. M.
Pillion, J. C.
Potter, H.
Shearman, H. P.
Western Col. Lib.
Whelpton, P. K.

Painesville
Lake Erie Col., Murray Lib.

South Euclid
Notre Dame Col. Lib.

Springfield
Krauss, D. T.
Todd, E. S.
Wittenberg Col. Lib.

Tiffin
Horak, J.

Toledo
Becker, N. M.
Bellemore, D. H.
Black, H. R. E.
De Sales Col. Lib., 815 Superior St.
Frey, H. A.
Miller, G. W.
Searles, C. K.
Theodorides, A.
Toledo Pub. Lib.
Toledo Univ. Lib., 2801 W. Bancroft St.

Warnock
Thornborough, W. G., Jr.

Waynesville
Gilman, S., R.F.D. 2

Westerville
Otterbein Col. Lib.

Wilberforce
Wilberforce Univ., Carnegie Lib.

Wooster
Eberhart, E. K.
Tostlebe, A. S.
Wooster Col. Lib.

Yellow Springs
Antioch Col. Lib.
Carlson, V.

Youngstown
Pub. Lib., Reuben McMillan Free Lib., Wick and Rayen Aves.
Smith, J. E.
Youngstown Col. Lib., 410 Wick Ave.

Zanesville
McGinnis, R. D.

OKLAHOMA

Ada
East Central State Teachers Col. Lib.

Bethany
Bethany-Peniel Col.

Durant
Southeastern State Col. Lib.

Edmond
Central State Teachers Col. Lib.

Enid
Phillips Univ. Lib., Univ. Sta.

Langston
C. A. and N. Univ. Lib.

Miami
Northeastern Junior Col., 3rd and I Northeast
Percefull, S. C.

Norman
Adams, A. B.
Campbell, C. A.
Griswold, J. A.
Schaper, W. A.
Shuman, R. B.
Sollenberger, I. J.
Univ. of Oklahoma Lib.

Oklahoma City
Carnegie Lib.

Shawnee
Oklahoma Baptist Univ. Lib.

Stillwater
Baugh, R. H.
Burris, E. C.
Larson, A. L.
Nahl, P. C.
Nelson, P.
Oklahoma A. and M. Col. Lib.
Thomas, R. D.
Wallin, Z. B.

Tahlequah

Northeastern Teachers Col. Lib.

Tonkawa

Univ. Preparatory School and Junior Col. Lib.

Tulsa

Finney, T. W.
Tulsa Pub. Lib.
Univ. of Tulsa Lib.

Weatherford

Southwestern State Col. Lib.

OREGON

Ashland

Southern Oregon Col. of Educa. Lib.

Corvallis

Oregon State Agric. Col. Lib.
Wheeler, B. O.

Eugene

Aitchison, B.
Comish, N. H.
Crumbaker, C.
Erb, D. M.
French, D. R.
Morris, M. H.
Morris, V. P.
Univ. of Oregon Lib.
Wood, L. A.

Forest Grove

Pacific Univ. Lib.

Portland

Akerman, C.
Goldhammer, B.
Keezer, D. M.
Lib. Asso. of Portland
Mason, W. E.
Raver, P. J.
Reed Col. Lib.
U. S. Dept. of the Interior, Bonneville Project, Box 3537

St. Benedict

Keber, Urban, St. Benedict's Abbey

Salem

Oregon State Lib.
Willamette Univ. Lib.

PENNSYLVANIA

Aliquippa

B. F. Jones Memorial Lib.

Allentown

Muhlenberg Col. Lib.
Richards, H. E.

Altoona

Maneval, R. K.

Annville

Lebanon Valley Col. Lib.
Stokes, M. L.

Ardmore

Mack, R. H.

Beaver

Bennett, V. E.
Mitchell, A. W.

Beaver Falls

Geneva Col., McCartney Lib.

Ben Avon

Dinic, C. J.

Bethlehem

Bishop, W. L.
Bradford, F. A.
Bratt, E. C.
Carothers, N.
Cowin, R. B.
Curtis, G. B.
Danhof, C. H.
Diamond, H. M.
Eby, B. S.
Mayer, R. W.
Tripp, L. R.

Bryn Mawr

Bryn Mawr Col. Lib.

California

State Teachers Col. Lib.

Cambridge Springs

Alliance Col.

Carlisle

Dickinson Col. Lib.
Fink, C. W.
Warner, W. J.

Chambersburg

Wilson Col., John Stewart Memorial Lib.

Chestnut Hill

McMullan, W. N.
Phillips, Walter M., 9500 Marstan Rd.

Cheyney

Lemon, T. A.
Training School for Teachers Lib.

Churchville

Fleisher, A.

Easton

Lafayette Col. Lib.
Phinney, J. T.
Pub. Lib.
Ratzlaff, C. J.

East Pittsburgh

Newbury, F. D.
West, R. J.

East Stroudsburg

State Teachers Col.

Erie

Erie Junior Col., Erie Trust Bldg.
Erie Pub. Lib.
Stout, Randall, 914 Chestnut St.

Gettysburg

Larkin, G. R.
Saby, R. S.

Grove City

Grove City Col. Lib.
Haines, G. H.

Harrisburg

Hoyle, H.
Pennsylvania State Lib.

Haverford

Bancroft, G.
Fetter, F. W.
Haverford Col. Lib.
Russell, L. H.

Hazleton

Hazleton Pub. Lib.
Janssen, H.

Huntingdon

Zassenhaus, H. K.

Immaculata

Madeleine, M. G.

Jenkintown

Liberty, Miss, Beaver Col.

Johnstown

Johnstown Junior Col.
May, J. W.

Kingston

Crook, W. H.

Lancaster

Barnes, H. R.
Fischer, H.
Franklin and Marshall Col. Lib.
Laird, N. P.

Lansdowne

Sweeney, S.
Teaf, H. M., Jr.

Latrobe

Kent, R. P.

Lewisburg

Biscoe, A. B.
Bucknell Univ., Carnegie Lib.
Peterson, R.

Lincoln University

Vail Memorial Lib.

Llanerch (Del. Co.)

Foery, R. W.

Loretto

St. Francis Col. Lib.

Mansfield

State Teachers Col. Lib.

McKeesport

Buchanan, F.

Meadville

Allegheny Col. Lib.
Fisher, J. L.
Long, L. J.

Merion

Huebner, S. S.

Mt. Lebanon

Blair, J. J.

New Wilmington

McKee, C. W.

Philadelphia

Alderfer, E. B.
Alderson, W.
Atkinson, S. K.
Balderston, C. C.
Barkas, B. W.
Bell, J. F.
Bendiner, I.
Bezanson, A.
Bird, D. E.
Bowman, R. T.
Breyer, R. F.
Budd, T. A.
Buehler, A. G.
Burdick, E. D.
Bye, R. T.
Capp, S. B.
Carson, W. J.
Christman, F. L.
Clewett, R. M.
Cochran, H. A.
Cox, R.
Doering, E. R.
Drexel Inst. Lib.
Emerich, T. P.
Fair, M. L.
Fed. Res. Bank of Philadelphia Lib., P.O. Box 1394
Fenninger, C. W.
Fisher, W. E.
Flubacher, J. F.
Frain, H. L.
Gemmill, P. F.
Gill, J. D.
Harr, L. A.
Harris, W. C.
Hayman, H. H.
Hench, W. M.
Hess, H. W.
Hettinger, H. S.
Hobart, D. M., Curtis Publishing Co., Independence Sq.
Hoffman, G. W.
Hovde, H. T.
Howell, P. L.
Huebner, G. G.
Johnson, E. R.
Keith, E. G.
Kelsey, C.
Ledig, A. K.
Levine, A. T.
Lewis, E. H.
Lib. Co. of Philadelphia, Juniper and Locust Sts.
Lockley, L. C.
Loman, H. J.
Loucks, W. N.
Magdoff, H. S.
Malott, E. O.
Mandel, B.
Mead, E. S.
Newman, W. H.
Noetzel, G. A. J.
Palmer, G. L.
Patterson, E. M.
Patterson, G. F.
Patterson, S. H.
Philadelphia Free Lib., Period. Dept., Middle City Sta.
Plummer, W. C.
Provident Mutual Life Ins. Co. of Philadelphia Lib., P.O. Box 7379
Rose, J. R.
Rosewater, V.
Rowland, J. P.
Rowlands, D. T.
Scholz, K. W. H.
Schrag, W. A.
Sienkiewicz, C. A.
Stout, C. F. C.
Stradley, L. P.
Taylor, G. W.
Taylor, W. H.
Temple Univ. Lib., Broad and Berks Sts.
Thompson, C. S.
Thurston, M. F.
Unterberger, S. H.
Wall, A.
Warrington, W. E.
Way, W., Jr.
Weintraub, D.
Williams, A. H.
Woerner, K.
Young, R. A.

Pittsburgh

Amos, J. E.
Balcom, B. R.
Bass, L. W.
Baxter, R. J.
Blackburn, R. F.
Boer, A. E.
Carnegie Free Lib. of Allegheny
Carnegie Inst. of Tech. Lib., Schenley Pk.
Carnegie Lib., Period. Dept., 4400 Forbes St.
Cipriani, A. B.
Coleman, R. W.
d'Essipri, M.
Dixon, R. A.
Dowling, E. J.
Duquesne Univ. Lib., 904 Vickroy St.
Engstrom, B.
Farley, J. T.
Ferguson, J. M.
Field, K.
Flocken, I. G.
Fritz, W. G.
Fuller, K. G.
Gabbert, M. R.
George, W. D.
Gow, J. S.
Guild, L. R.
Hamilton, F. A., Jr.
Hosack, Specht, Conniff and Wood, Park Bldg.
Hotchkiss, W. E.
Isaacs, A.
Jones, M.
King, H. J.
Knight, E. L.
Lanfear, V. W.
Lesher, C. E.
Lukens, S. J.
McCullough, J. V.
McDiarmid, O. J.

McKay, M. K.
McMurray, H. D.
Mt. Mercy Col. Lib., 3333 5th Ave.
Mudge, E. W.
Pennsylvania Col. for Women Lib., Woodland Rd.
Phelps, H. A.
Ross, S. B.
Rossell, R. T.
Ryan, John T., Jr., 5914 Walnut St.
Scott, R. H.
Slesinger, R. E.
Spiegel, H. W.
Strong, G. B.
Tippetts, C. S.
Trefftzs, K. L.
Turney, M. C.
Tyson, F.
Ulmer, C. D.
Univ. of Pittsburgh Lib., Cathedral of Learning, Room 530
Univ. of Pittsburgh, Bur. of Bus. Res.
Watson, J. P.
Wendt, E. F.
Worthing, M. W.
Wunder, C. S.

Reading

Reading Pub. Lib.

Scranton

Johnston, C. E.
Marywood Col. Lib., P.O. Box 491
Univ. of Scranton Lib.

Selinsgrove

Lawson, E. W.

Sewickley

Harbison, F. H.
Tener, K. J.

Slippery Rock

State Teachers Col.

State College

Butt, W. E.
Dye, E. V.
Foster, P. F.
Hasek, C. W.
Hawkins, E. R.
Hutchinson, K. D.
Leffler, G. L.
Mitch, G. F.
Pennsylvania State Col., Carnegie Lib.
Pyle, H. G.
Van Sant, E. R.
Waters, R. H.
Wueller, P. H.

Swarthmore

Ashton, H.
Fraser, H. F.
Malin, P. M.
McCahan, D.
Neisser, H. P.
Swarthmore Col. Lib.
Wilcox, C.

Uniontown

Brewster, R. Wallace, Fayette Undergrad. Center, Ella Peach School Bldg.

Upper Darby

Kahler, C. M.
Wiesen, T. F.

Villanova

Villanova Col. Lib.

Wallingford

Morris, H. L.

Washington

Boord, H. O.
Morris, B. R.
Waltersdorf, M. C.
Washington and Jefferson Col., Memorial Lib.

Wayne

Blackstone, A. E.

Waynesburg

Brock, L. V.

West Chester

Brainerd, C. P.

Williamsport

Williamsport Dickinson Seminary Lib.

PHILIPPINE ISLANDS

Baguio City

Univ. of the Philippines, Col. of Arts and Sci. Lib.

Los Banos

Univ. of the Philippines Lib., Col. of Agric., Laguna

Manila

Carlson, Mrs. Mabel R., P.O. Box 2137
Fernandez, Carlos P., 109 J. Luna
Legislative Service Office, Nat. Assembly
Nat. Development Co., P.O. Box 3360
Nat. Economic Council Lib., Commonwealth of the Philippines
Phil. Edu. Co., Inc., Magazine Dept., P.O. Box 620
Univ. of the Philippines Lib.

PUERTO RICO

Mayaguez

Univ. of Puerto Rico Lib., Colleges of Agric. and Engineering

Rio Piedras

Bermudez, J.
Codero, R. de J.
Descartes, S. L.
Univ. of Puerto Rico, Univ. Lib.

San German

Poly. Inst. of Puerto Rico

San Juan

Carnegie Lib. of Puerto Rico, Box 280

RHODE ISLAND

Bristol Ferry

Eddy, S. J.

Kingston

Rhode Island State Col. Lib.
Rockafellow, R.

Providence

Adams, J. P.
Beatty, W. C.
Bliss, Z. W.
Bosland, C. C.
Brown Univ. Lib.
Brown, W. A., Jr.
Kirkpatrick, A. L.
Poole, K. E.
Providence Pub. Lib.
Rhode Island State Lib.
Shoemaker, J. H.
Shors, W. F.
Taft, P.
Tebbutt, A. R.
Wilson, H. W.

SOUTH CAROLINA

Charleston

Bernfield, F. M.

Citadel Lib.
Wilcox, S.

Clemson College

Aull, G. H.
Hicks, W. T.
Ward, J. E., Jr.

Clinton

Kennedy, J. B.

Columbia

Benedict Col., Starks Lib.
Univ. of South Carolina, Main Lib.

Due West

Erskine Col. Lib.
Wright, J. M.

Greenville

Furman Univ. Lib.

Rock Hill

Winthrop Col., Carnegie Lib.

Spartanburg

Converse Col. Lib.

SOUTH DAKOTA

Brookings

South Dakota State Col. Lib.

Huron

Huron Col. Lib.
Spurrier, L.

Mitchell

Dakota Wesleyan Univ.

Sioux Falls

Augustana Col. Lib.
Sioux Falls Col. Lib.

Vermillion

Univ. of South Dakota Lib.
Sparks, E. S.

Yankton

Yankton Col. Lib.

TENNESSEE

Chattanooga

Chattanooga Pub. Lib.
Kruesi, P. J.
Phelps, C. W.
Univ. of Chattanooga Lib.

Greenville

Tusculum Col. Lib.

Jefferson City

Poindexter, C.

Knoxville

Barnett, P.
Bertram, R. F.
Corry, O. C.
Glocker, T. W.
Goeltz, J. D.
Knoxville Col. Lib.
Kohler, E. L.
Lamke, E. A.
Lawson McGhee Lib.
Macon, H. L.
Rapp, R. E.
Tennessee Valley Authority, Tech. Lib.
Univ. of Tennessee Lib.
Ward, F. B.
White, C. P.

Madison College

Madison Col., Druillard Lib.

Martin

Univ. of Tennessee, Junior Col. Lib.

Maryville

Wendt, P. F.

Memphis

Goodwyn Inst. Lib.
Hon, R. C.
Junkin, W. R.
Moloney, J. F.
Seidman, P. K.
Southwestern Lib.

Milligan College

Milligan Col. Lib.

Nashville

Agric. and Indus. State Col. Lib.
Campbell, R. A.
Cutler, A. T.
Eberling, E. J.
Fisk Univ. Lib.
Garis, R. L.
George Peabody Col. for Teachers
Vanderbilt Univ. Lib.
Van Sickle, J. V.

Norris

Howard, T. L.
Morrison, V. G.

Pressmen's Home

Garman, P. L.

Sewanee

Kayden, E. M.
Univ. of the South Lib.

TEXAS

Abilene

Hardin-Simmons Univ. Lib.

Alpine

Sul Ross State Teachers Col. Lib.

Arlington

Armstrong, A. B.
Behringer, E. N.
North Texas Agric. Col.

Austin

Allen, R. A.
Ayres, C. E.
Buechel, F. A.
Cox, A. B.
Cox, R. A.
Dolley, J. C.
Fitzgerald, J. A.
Hale, E. E.
Irons, W. H.
Lay, C. F.
Love, J. L.
Miller, E. T.
Montgomery, R. H.
Newlove, G. H.
Nielander, W. A.
Simmons, C. D.
Smith, E. G.
Stocking, G. W.
Stockton, J. R.
Texas Lib. and Historical Commission, State Lib.
Univ. of Texas Lib., Serials Acquisition
Winston, A. P.

Canyon

West Texas State Teachers Col. Lib.

College Station

A. and M. Col. of Texas, Agric. Econ. Dept.
A. and M. Col. of Texas, Dept. of Econ.
A. and M. Col. of Texas, Lib.
Hamilton, T. R.
Leland, T. W.

Dallas

Dallas Pub. Lib.
Fed. Res. Bank of Dallas Lib.
Hauhart, W. F.
Smith, A. A.
Southern Methodist Univ. Lib.

Denton

Jenison, E. S.
Lang, A. S.

North Texas State Teachers Col. Lib.
Texas State Col. for Women, Bralley Memorial Lib.

El Paso

Col. of Mines and Mettallurgy Lib.

Fort Sam Houston

Hart, W. L.

Fort Worth

Carnegie Pub. Lib.
Texas Christian Univ. Lib.

Galveston

Rosenberg Lib.

Graham

Graham, M. K.

Houston

Clayton, W. L.
Gonzalez, R. J.
Houston Pub. Lib.
Rice Inst. Lib.
Univ. of Houston Lib., St. Bernard at Wheeler

Huntsville

Sam Houston State Teachers Col. Lib.

Kingsville

Texas Col. of Arts and Industries Lib.

Lubbock

Ellsworth, J. O.
Texas Tech. Col. Lib.

Nacogdoches

Stephen F. Austin State Teachers Col. Lib.

San Antonio

Murdoch, A. E.
San Antonio Pub. Lib.

San Marcos

Southwest Texas State Teachers Col. Lib.

Stephenville

John Tarleton Agric. Col. Lib.

Tyler

Texas Col. Lib.
Tyler Junior Col.

Waco

Baylor Univ. Lib.
Deupree, R. G.
Heimann, E. A.
Moore High School, 50 Clay Ave.

Waxahachie

Kerby, J. L.
Trinity Univ. Lib.

Wichita Falls

Kemp Pub. Lib.

UTAH

Cedar City

Branch Agric. Col. Lib.

Logan

Lee, M. W.
Murray, E. B.
Thorne, A. C.
Utah Agric. Col. Lib.

Ogden

Carnegie Free Lib.

Provo

Pond, A. S.

Salt Lake City

Adams, T. C.
Bearnson, J. B.
Fox, F. Y.
McConnell, Hunter J., Box 2183
Shields, T. K.
Thomas, G.
Univ. of Utah Lib.
Walker, D.

VERMONT

Bennington

Bennington Col. Lib.

Burlington

Briggs, L. L.
Groat, G. G.
Pond, A.
Univ. of Vermont Lib.

Middlebury

Fife, H. M.
Middlebury Col. Lib.
Patterson, J. H.
Prentice, J. S.
Rusby, P.

Montpelier

Meredith, L. D.
Nat. Life Ins. Co. Lib.
Vermont State Lib.

Northfield

Norwich Univ. Lib.

Norwich

Carter, W. A.
Peisch, A. M.

Poultney

Akerstrom, C. E.

Richmond

Heatherington, D. F.

Springfield

Flanders, R. E.

Winooski Park

St. Michael's Col.

VIRGINIA

Alexandria

Armstrong, F. A.
Burhans, N. C.
Engquist, E. J., Jr.
Johnson, G. G., Jr.
Lillaston, J. B.
Miller, P. L.
Myers, H. B.
Riley, D. C.
Ryder, O. B.
Stocking, C. A.

Arlington

Beckner, E. R.
Browne, A. E.
Caskey, W. F.
Colebank, A. W.
Custard, H. L.
Ecker-Rácz, L. L.
Elvove, J. T.
Ferger, W. F.
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Nat. Lib. of Wales
Univ. Col. of Wales Lib.

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ZANZIBAR

Zanzibar

Bartlett, C. A.

TABLE I

MEMBERSHIP STATISTICS

1886–1939

Year	*Annual*	*Life*	*Honorary*	*Total*	*Year*	*Annual*	*Life*	*Honorary*	*Total*
1886				182*	1913	2,157	83	9	2,249
1887				300*	1914	2,060	81	8	2,149
1888				500*	1915	2,004	80	7	2,091
1889				†	1916	2,033	80	7	2,120
1890				635*	1917	2,077	87	6	2,170
1891				718*	1918	2,130	87	5	2,222
1892				†	1919	2,125	86	5	2,216
1893	482	73	17	572	1920	2,213	84	4	[illegible]
1894	484	72	16	572	1921	2,230	102	3	[illegible]
1895	485	71	16	572	1922	2,296	102	8	2,406
1896	479	74	15	568	1923	2,479	98	10	2,587
1897	477	71	15	563	1924	2,691	98	9	2,798
1898	488	69	14	571	1925	2,816	92	8	2,916
1899	498	68	12	578	1926	2,538	88	14	2,640
1900	541	69	11	621	1927	2,562	86	16	2,664
1901	722	67	11	800	1928	2,620	78	12	2,710
1902	782	67	11	860	1929	2,671	79	16	2,766
1903	757	67	11	835	1930	2,704	76	17	2,797
1904	792	67	11	870	1931	2,626	64	15	2,705
1905	800	66	11	877	1932	2,488	62	19	2,569
1906	794	66	11	871	1933	2,306	58	20	2,384
1907				1,002*	1934	2,433	54	19	2,506
1908				868	1935	2,473	53	18	2,544
1909				1,205	1936	2,556	48	17	2,621
1910	1,440	69	10	1,519	1937	2,652	44	17	2,713
1911	2,103	78	9	2,190	1938	2,764	41	19	2,824
1912	2,369	88	9	2,466	1939	2,906	40	20	2,966

* Total includes members and subscribers.

† Figures for these years not available.

TABLE II

MEMBERS AND SUBSCRIBERS FOR SELECTED YEARS

Year	*Members*	*Subscribers*	*Total*
1893	572	82	654
1902	860	151	1,011
1910	1,519	183	1,702
1920	2,301	565	2,866
1930	2,797	1,056	3,853
1935	2,544	1,118	3,662
1936	2,621	1,178	3,799
1937	2,713	1,219	3,932
1938	2,824	1,270	4,094
1939	2,966	1,292	4,258

NOTE: Some of the figures for earlier years have been estimated.

TABLE III

GEOGRAPHICAL ANALYSIS OF MEMBERS AND SUBSCRIBERS
(As of May 15, 1940)

State	*Members*	*Subscribers*	*Total*
NORTHEAST			
Maine	12	5	17
New Hampshire	23	6	29
Vermont	13	7	20
Massachusetts	211	40	251
Rhode Island	14	4	18
Connecticut	77	12	89
New York	635	111	746
Delaware	9	4	13
Pennsylvania	218	56	274
New Jersey	95	22	117
Maryland	58	14	72
West Virginia	7	10	17
District of Columbia	314	38	352
	1,686	329	2,015
MIDDLE			
Ohio	137	49	186
Michigan	67	30	97
Indiana	57	22	79
Wisconsin	51	18	69
Illinois	264	53	317
Minnesota	49	31	80
Iowa	35	16	51
Missouri	52	27	79
	712	246	958
SOUTHWEST			
Oklahoma	15	16	31
Texas	36	35	71
New Mexico	3	1	4
Arizona	5	3	8
	59	55	114

State	*Members*	*Subscribers*	*Total*
SOUTHEAST			
Tennessee	28	17	45
North Carolina	43	11	54
Mississippi	3	7	10
Virginia	89	15	104
Kentucky	25	11	36
South Carolina	7	7	14
Georgia	10	16	26
Alabama	12	13	25
Arkansas	12	9	21
Florida	17	8	25
Louisiana	32	12	44
	278	126	404
NORTHWEST			
North Dakota	4	4	8
South Dakota	2	7	9
Nebraska	25	11	36
Kansas	30	19	49
Montana	6	3	9
Wyoming	3	4	7
Colorado	28	7	35
Idaho	2	3	5
Utah	10	5	15
	110	63	173
FAR WEST			
Oregon	14	10	24
Washington	27	17	44
California	143	73	216
Nevada	8	0	8
	192	100	292

SUMMARY

	Members	*Subscribers*	*Total*
Northeast	1,686	329	2,015
Middle	712	246	958
Southeast	278	126	404
Southwest	59	55	114
Northwest	110	63	173
Far West	192	100	292
	3,037	919	3,956

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1819 Broadway, New York, N.Y.

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Representatives of the American Economic Association: John M. Clark, 1937-40; Frank H. Knight, 1940-43

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REGIONAL ECONOMIC ASSOCIATIONS

MID-WEST ECONOMIC ASSOCIATION

OFFICERS, 1940

President, J. E. Kirshman, University of Nebraska. *Vice-Presidents,* H. L. Jome, DePauw University, J. S. Robinson, Carleton College. *Secretary-Treasurer,* C. W. Thompson, State University of Iowa.

The Mid-West Economic Association was founded in 1934, and has held annual meetings in April each year since. The programs begin Thursday evening and extend through Saturday forenoon. The area embraces Indiana, Illinois, Missouri, Kansas, Iowa, Nebraska, North Dakota, South Dakota, Minnesota, and Wisconsin. The organization is informal. Any person engaged in full-time teaching or research, or graduate study, or graduate study and research or teaching in the field of economics or commerce is eligible for membership. A registration fee of fifty cents is paid by those in attendance in lieu of a membership fee. There were 250 registrations in 1940. The Association sponsors no publication. The annual program is prepared and the place of meeting is chosen by the Executive Committee consisting of the President, two Vice-Presidents, Secretary-Treasurer, and the past president last holding office.

Past Presidents

1934 S. L. Miller, State University of Iowa
1935 M. H. Hunter, University of Illinois
1936 Dale Yoder, University of Minnesota
1937 J. A. Estey, Purdue University
1938 John Ise, University of Kansas
1939 W. B. Taylor, University of Wisconsin

SOUTHERN ECONOMIC ASSOCIATION

OFFICERS, 1940

President, John B. Woosley, University of North Carolina. *Vice-Presidents: Program,* Malcolm H. Bryan, Federal Reserve Bank of Atlanta; *Membership,* Ralph C. Hon, Southwestern College; *Research,* Samuel M. Derrick, University of South Carolina. *Editor,* Harlan L. McCracken, Louisiana State University. *Secretary-Treasurer,* D. Clark Hyde, University of Virginia.

The Southern Economic Association was organized in November, 1930, as the outcome of three annual Southeastern Economic Conferences. The purpose of the Association is the stimulation of economic thought and research in connection with the economic problems of the South.

Membership dues are $3.00 a year for individuals and $10.00 for institutions.

The *Southern Economic Journal* is a quarterly published jointly by the Southern Economic Association and the University of North Carolina. The Association subscribes for its entire membership. The Board of Editors is made up of E. M. Bernstein, of the University of North Carolina, T. C. Bigham, of the University of Florida, A. S. Keister, of the Woman's College of the University of North Carolina, M. C. Leager, of the North Carolina State College of the University of North Carolina, H. L. McCracken, of Louisiana State University, and E. Z. Palmer, of the University of Kentucky. G. R. Schwenning, of the University of North Carolina, is Managing Editor.

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1930 Walter J. Matherly, University of Florida
1931 Lee Bidgood, University of Alabama
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1934 R. P. Brooks, University of Georgia
1935 Albert S. Keister, Woman's College of the University of North Carolina
1936 James W. Martin, Kentucky State Commissioner of Revenue
1937 Calvin B. Hoover, Duke University
1938 Truman C. Bigham, University of Florida
1939 Robert H. Tucker, Washington and Lee University

PACIFIC COAST ECONOMIC ASSOCIATION

OFFICERS, 1940

President, Arthur G. Coons, Claremont Colleges. *Vice-President,* Carl S. Dakan, University of Washington. *Secretary-Treasurer,* Hampton K. Snell, University of Southern California. *Editor,* Calvin Crumbaker, University of Oregon. *Executive Committee,* officers and William C. Jones, Vernon G. Sorrell, Ralph H. Farmer, Joseph A. Crumb. *Trustees,* Bernard F. Haley, Stuart Daggett, Kenneth Duncan.

The Pacific Coast Economic Association, under a somewhat different name, was established in 1922, largely through the efforts of Alfred C. Schmitt, Edwin C. Robbins, Stephen I. Miller, and Eliot Jones. The first meeting was held in Portland, Oregon. Membership is of two kinds: (1) institutional members, originally confined to accredited universities and colleges west of the Rocky Mountains, but now changed to include any educational institution approved by the Executive Committee, west of the Rockies; (2) individual members, who may be any person interested in the theory, principles and problems of economics and business. In addition to the professional economists, many Pacific Coast businessmen are members.

One of the principles of the P.C.E.A. is to devote approximately one third or more of each annual conference to problems of the Pacific Slope; another is to co-operate with the efforts of the Social Science Research Council.

There are at present 25 institutional and 198 individual members, representing 37 collegiate institutions. Institutional dues are $10.00 and $5.00, depending upon size of the institution; individual membership is $1.50 yearly. The principal publication is the annual proceedings.

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